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A Descriptive Study of Part-time Farming on the Rural-Urban Fringe of Edmonton

by

Karen Beryl Brewka

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

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Date... April 20, 1983.....

Dedication

This work is dedicated to my son Kurt, who somehow managed to grow and thrive throughout my sojourn in graduate school. To my parents, for their help and understanding, I owe a debt of gratitude which can never be repaid.

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Abstract

One of the symptoms of change taking place in Alberta's agricultural industry over the last four decades has been a steady increase in the number of people who combine the business of farming with working off the farm (part-time farming).

In order to understand the effects of part-time farming in a particular area and to determine the implications of the increased numbers of part-time farming families for agricultural policy, it became necessary to understand the nature of part-time farming and the extent to which people are engaging in the phenomenon. To this end a descriptive study of part-time farming was undertaken.

This phenomenon, particularly evident on the rural-urban fringe of metropolitan centers was examined using a socio-economic survey designed to collect primary data at the farm family level. Through selected characteristics and comparative analysis, a profile of part-time farming families on the rural-urban fringe of Edmonton was developed.

Part-time farm operators and their spouses were younger, more highly educated, had lower agricultural sales and were less dependent on farming than full-time farm operators and their spouses. These families, however, had fewer differences with respect to amount of land owned and rented, use of extension services, credit use, and some other characteristics.

Further investigation into the part-time farming families was carried out using entry direction (urban, non-farming and rural, full-time farming) as a distinguishing characteristic. It was found that the majority of differences between part and full-time farming families could be attributed to differences between these entrant groups, with rural entrants more closely approximating full-time farming families than urban entrants.

The differences between full-time and part-time farming families and between urban and rural entrants are extensive in certain areas. The implication being that part-time farming families should be taken into consideration as distinct from full-time farming families when determining agricultural policy. Also, part-time farming families are a heterogenous group, with entry direction being a most useful discriminating characteristic. On this basis, these two groups should be differentiated when making policy decisions.

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I. NATURE AND SIGNIFICANCE OF THE PROBLEM

A. Background to the Problem

The purpose of this research was to determine the nature and extent of part-time farming and its various components on the rural-urban fringe of Edmonton. This knowledge is required in order to further the understanding of part-time farming for agricultural policy and extension programming in Alberta. Recent increases in part-time farming have caused some concern as, traditionally, policy and extension programming have been focused on full-time farming. The following chapter discusses various aspects and questions about part-time farming. This discussion is followed by the delineation of the research problem and objectives, resulting in a framework for this discriptive study.

The number of Alberta farmers who work off the farm has been slowly increasing over the past several decades. Research indicates that in the 1940 Census, farm operators reporting off-farm work comprised 34% of all farm operators. This percentage declined to a low of 16% in 1955 and increased to 26% in 1960. In 1965, 33% of all operators reported off-farm work. Since then, the percentage slowly increased to 34% in 1970 and 35% in 1975 (Jensen, 1978:3). The 1981 census indicated that 42% of Alberta farmers worked off the farm (Statistics Canada, 1982:25). Along with the trend toward more off-farm work by farm operators, the

amount of full-time off-farm employment assumed by farmers has increased from 10% in 1960 to 18% in 1975 (Jensen, 1978:7). In 1981, 33% of all census farmers reported full-time off-farm work. The incidence of part-time farming near cities is higher than that for the province as a whole. For example, 49% of census farm operators in Census Division 11, which contains Edmonton, worked off the farm in 1981. The increase in off-farm work by farmers near Edmonton (one of the province's major urban centers) is related to changes taking place in the area. Rapid urbanization and a decline in net farm incomes are influences which may have combined, in the area around Edmonton, to result in accelerated trends towards more part-time farming.

Where do part-time farmers come from? Fuguitt's (1963) reflections indicated an increase in the number of people who move to the country, start farming, yet maintain an urban occupation. Also, an increased reliance on off-farm income for people who were previously farming full-time was evident. It would seem that there are two directions of entry into part-time farming. One, from an urban-based, non-farming position, secondly, from a rural-based, full-time farming position. These entry directions which represent both urban and rural-based influences on increased part-time farming are evident in the area around Edmonton. A discussion of these entry directions, their relationship to increased part-time farming, and the problems arising from this increase continues in the next two sections.

From the City

An increase in the population density in the countryside surrounding Edmonton has been noted (Hornbrook, 1981). Part of this increase may be due to former city dwellers taking up residence in the country and maintaining urban occupations. These people, to some extent, may be or wish to become agriculturally productive, perhaps adding to the recent increases in part-time farming.

The researcher has become aware of some concerns regarding the agricultural productivity of people who move to the country and combine farming with an urban occupation. The motivations these people have to buy land and farm that land may influence production decisions and the use of agricultural resources. As Gasson has stated:

> *Urbanization of rural areas introduces new types of farm occupiers with different motives and aspirations from the established full-time farmer and the differences of approach between the two types will probably be reflected in the systems of farming adopted and in their performance as farmers (Gasson, 1966:34).*

Very often urban newcomers to the farming industry are not taken seriously by the farming community. They are considered "hobby farmers", just "playing" at farming. As previously mentioned, agricultural policy and extension programming are designed with the full-time farmer as the subject or user group. Thus, some confusion may result on the part of institutions and agencies with the introduction of this new clientele group into farming.

From the Farm

In areas affected by urbanization, the land becomes increasingly segmented near the city. This has taken place around Edmonton and may result in units of land too small for the development or maintenance of full-time farms. As land is being taken out of agricultural production for various urban uses, there is pressure exerted on the remaining agricultural land. Land values increase. Buying more land ceases to be a viable way to expand the farm, as the cost of that land is determined by more than just the agricultural value (Waldo, 1963). An alternative is for farm operators, spouses, or family members to take off-farm employment, increasing the amount of capital available for farm investment or to maintain a certain standard of living. Leasing land is another alternative to buying; but again, if urbanization pressures are exerted, leased land can be developed by the owner for other purposes, taking that land out of agricutural production.

Many farm families have been experiencing financial difficulties with the operation and maintenance of their farms. The cost of agricultural inputs has continued to increase along with declines in commodity prices received by farmers. This cost-price squeeze has led many members of farm families into the off-farm work force. During the 1970's these off-farm jobs were readily available as Edmonton was experiencing a boom economy accompanied by rapid growth in primary and secondary industries related to

oil and gas extraction, refining, and processing.

To begin to understand part-time farming, however, a definition of the phenomenon had to be determined. Following is a discussion of the definitional problems surrounding part-time farming and an explanation of the decisions made regarding various definitional components.

Definitions of Part-time Farming

Much controversy was encountered when the author attempted to define part-time farming. It can be generalized as *the combination of agricultural production with other income generating activities.* This definition includes a wide spectrum of situations, from retired farmers who have a minimal farming operation with investment or retirement income to urban-based professionals who own and operate large farms. The literature suggests there are as many definitions of part-time farming as there are studies. As well as the diversity of definitions encountered in other studies, there are differences in census definitions over time and by country, making comparisons difficult.

It became necessary to review definitions which have been used in census and previous studies to determine the components of these definitions. For example, the 1969 U.S. Census of Agriculture defines the part-time farm as one which has a value of farm products sold of $50-$2,499 and a farm operator under 65 years of age who worked off the farm 100 days or more in the Census year (Anderson, 1977:66).

This definition limits the scope of part-time farming situations to a certain agricultural sales class and a certain minimum days of off-farm work by the farm operator (Kada, 1980:2). As well, the definition and others like it do not include part-time farming situations which exist in higher sales classes (Coughenour, 1982; Havens, 1982) nor does it include the contribution to farm family income of other family members. Hence, the definition is too limited in scope, a problem affecting many of the definitions of part-time farming found in the literature, a problem difficult to avoid when defining the term.

In Canada, part-time farming is found in all farm sales classes and operator age classes, (Statistics Canada, 1978:28-5). Canadian statistics on part-time farming include all census farm operators who work any days off the farm in the census year. Although the Canadian definition poses fewer limitations than the American definition it is still restricted to the farm operator and excludes contributions by other family members.

Different criteria have been used to define part-time farming. Income is one of these. For example, *families which derived more than half their income from non-agricultural sources* were considered to be part-time farming families in one study (Stewart, 1944:3). Income is an important consideration when defining part-time farming, as the basis of part-time farming is the combination of income from more than one source. Income alone, however, is not a sufficient

factor from which to derive a definition of part-time farming. Cases in which investment or transfer income constitutes a large portion of family income would be classed as part-time although the farm family members may not work away from the farm. Part-time farming situations include active farming and active entry in the labor market in areas other than farming one's holding. Time must be spent in income generating activities apart from farming, thus the farmer with investment or retirement income would not be included in the definition.

Time, then, becomes an important part of a definition of part-time farming. For example, according to one definition, part-time farming is a situation in which *one or more (family) members was engaged in gainful off-farm work for at least 30 days in the previous year* (Kada, 1980:4), and *total farm activity represents less than full-time employment in terms of productive man work units and wherein the off-farm job has extended over a period of 100 days during the previous year* (Hillman, 1956:5). Income and time are the major terms of reference of a part-time farming definition. These components have been combined often to arrive at definitions. For example, part-time farmers are *those working 100 days or more off the farm in the calendar year or with income from non-farm sources exceeding the value of farm products sold* (Donohue, 1957:984). Restrictions such as percentage of income or minimum days of off-farm work, however, tend to exclude certain classes of

part-time farming situations and for that reason, such restrictions were not used in this research.

An area of difficulty arose when deciding if family members other than the operator should be included in a definition of part-time farming. The literature indicated that because of an increase in off-farm work by spouses of farm operators, they should be included, shifting the focus from the farm operator and the farm to a family unit which combines farm and non-farm work activities. This represents a further step in understanding part-time farming, for without the contributions of other family members many part-time farming situations could not exist. In many cases it is the spouse of the operator who either works off the farm or takes over farm labor requirements when the operator works off the farm (Wilkening, 1981). The inclusion of family members is reflected in the following definitions: *part-time farming is restricted to simple or independent commodity producers (family farmers) and their family members who derive off-farm income through wage labor* (Buttel, 1981:2), and, *part-time farming is the practice of a farm based household, in which one or more members are gainfully engaged in work other than, or in addition to farming the family's holding* (Fuguitt, 1977:7). It appears that spouses play a very important role in the successful operation of a farm. The daily absence of a spouse may have an effect on the farm operation (Heffernan, 1982:2). This effect may be both positive, as in the capital generated by

the off-farm work; or negative, as in reduced input into the farm and family organization. The off-farm work of the spouse was, therefore, included in a definition of part-time farming for this research.

Utilizing these components, the following definition of part-time farming was developed:

> *Part-time farming is the combination of farming activities with non-farm or off-farm remunerative work carried out by farm operators and/or their spouses.*

Implicit in this definition is the definition of two other categories: full-time farming and non-farming. Full-time farming is the activity of a farm-based household with no member gainfully employed in work apart from farming. Non-farming is represented by families who do not receive any income from the sale of agricultural products. These definitions set the boundaries of part-time farming for this study and are representative of the two directions of entry into part-time farming.

The Rural-urban Fringe

Part-time farming, a symptom of change, is more prevalent in areas affected by urbanization, specifically the rural-urban fringe. What is the rural-urban fringe and how this particular area related to part-time farming?

The rural-urban fringe is a zone of transition surrounding a city where urbanization influences land use and population changes which result in alterations to the social organization of farm communities (Fuguitt, 1976:246).

The outer boundaries of a fringe zone are characterized predominantly by agricultural land use, low population density, and communities which are more rural than urban. Inner boundaries, identified as "city limits", are characterized by industrial, residential, and commercial land uses, a higher population density, and metropolitan communities. Due to improved transportation systems, the rural-urban fringe extends to the approximate distance travelled by car in an hour. Commuting time within an hour one way is not considered to be a hardship but over an hour of commuting time ceases to be convenient to most people (Troughton, 1976:28).

Pockets of industrial and residential land coexist with farm land in rural-urban fringe areas. Land use conflicts occur and disruptions of traditional community social patterns take place as former urbanites move to the country. The effects of urban-rural migration and land use changes on existing rural-agricultural systems are most strongly felt in fringe areas (Buttel, 1981; Fuller and Mage, 1976):

> *One of the effects of change on the rural-urban fringe is an increase in part-time farming. Nearness to off-farm job opportunities result in a pull towards off-farm work by farmers and at the same time the increases in urban (to) rural migration add to the numbers of part-time farmers* (Fuguitt, 1963:246).

Therefore, it would be expected that the rural-urban fringe is a likely place to find more part-time farming families. For these reasons, the geographic area of this study was focused on Edmonton's rural-urban fringe.

B. The Research Problem

Previous discussion indicates that part-time farming families are found in a variety of situations. This variability, coupled with the recent increase in part-time farming near major urban centers in Alberta and a lack of knowledge about part-time farming has caused some concern regarding the implications of part-time farming for agricultural policy. How do part-time farming families compare to full-time farming families with regard to resource use and production efficiency? What are the reasons for entering a part-time farming situation? Is part-time farming used as an entry or exit vehicle into or out of agriculture? Does the phenomenon allow farmers to remain in agriculture despite the pressures exerted by alternate land uses and the economics of farming? Should the urban entrant to part-time farming be considered when determining agricultural policy? As an example, extension service personnel operating near the city may have some difficulty with an increase in demand for their time and expertise. An extension agent may be called upon to discuss fertilizer application rates for a given year with a well-known established farmer. This experience would be very different from one of being asked to teach someone with no experience or farm background how to farm. Production characteristics and the ensuing information needs of this new clientele may, then, be different from rural-based entrants into part-time farming as well as those farming full-time. How do extension

personnel adapt their services to meet the needs of this changing and growing clientele?

Whatever the reasons for combining farming with an off-farm job, coping with and adapting to the time demands of a dual occupation has an affect on the family and farm enterprise (Rosenblatt and Anderson, 1980). What adjustments are being made to accommodate the off-farm job? Is the part-time farmer as productive as his full-time counterpart? Is the increase in part-time farming a temporary response to job opportunities or is part-time farming a response to changes in agriculture?

It was evident that there was some confusion regarding what part-time farming is and what kinds of part-time farming situations exist. The social, economic, and farm production characteristics of farming families had to be determined. Problems and adjustments pertaining to dual employment situations had to be discovered to determine the implications, and extent of, inclusion of part-time farming in agricultural policy decisions. To gain an understanding of the persistence of part-time farming and the role part-time farming plays in the province's agricultural structure, it became necessary to determine the reasons people have for combining farming with off-farm work. Finally, it became necessary to know which information sources are used and the extent of use of extension services so institutions could determine if program content and delivery systems could or should be altered to specifically

include part-time farming families.

Although part-time farming has been documented at the aggregate level in Alberta, there was a lack of research which looks specifically at the people involved in part-time farming situations (Jensen, 1978). This problem is similar to that experienced by Kada. While researching part-time farming in Wisconsin and Japan, Kada summarized his research problem:

> *There was a lack of research on the micro-level behaviors of part-time farming units, ie., the nature of adjustments made by part-time farmers, impacts of dual jobholding on income levels and resource allocation patterns, and the implications of part-time farming for rural and community development* (Kada, 1980:xiii).

Kada's summary reinforces the concerns and direction of this research. The increase in the number of rural families engaged in part-time farming is one of many indicators of change in rural society, an expression especially prevalent in areas influenced by urbanization. Investigating characteristics of part-time farming families is significant as these families are reacting to change. Therefore, an understanding of the nature and extent of part-time farming will lead to clearer insights into sociological changes and ultimately how these changes affect the farming and rural population.

C. The Research Purpose and Objectives

The purpose of this research was to determine the nature and extent of part-time farming on the rural-urban fringe of Edmonton and through this determination arrive at the implications of part-time farming for agricutural policy and extension programming.

The objectives of this research, initially focussing only on part-time farming families, were expanded to include an examination of all farming families. The reasons for this expansion were two-fold. First, in order to determine policy implications, it became necessary to compare part-time farming situations with full-time farming situations so that areas of change within the farming population could be more clearly delineated. Secondly, the methodology used to identify part-time farming families also included full-time farming families (explained in Chapter IV). The names and addresses of part-time farming families could not be discriminated from the optimum sampling frame available to the researcher. It is the researcher's opinion that the scope and intent of the research has been enriched as a result of this inclusion. The following specific research objectives, therefore, result from the research purpose.

Research Objectives:

1. To determine: differences between part-time and full-time farming on the rural-urban fringe.
   a. how many farm families have off-farm work.
   b. the extent of off-farm work carried out by farm

families.

c. the social, economic, and farm production characteristics; future farming plans; problems; farming information sources and the use of extension services of farm families.

2. To determine differences between urban, non-farming entrants and rural, full-time farming entrants on the rural-urban fringe.

a. the proportion of part-time farming families from an urban, non-farming entry position and a rural, full-time farming entry position.

b. the extent of off-farm work carried out by urban, non-farming entrants and rural, full-time farming entrants.

c. the social, economic, and farm production characteristics; off-farm work characteristics; reasons for farming; reasons to work off the farm and adjustments made by part-time farming families to accommodate off-farm work.

D. Framework for Analysis

From the previous analysis of the problem it is evident that this research should be focused on a descriptive analysis of part-time farming. This descriptive analysis is comprised of two parts. First, a comparison between full-time and part-time farming families to point out the differences between these two farming types and to delineate

a profile of the part-time farming segment. Secondly, a comparison between the kinds of part-time farming families to assist in the development of a basis for for comparison and to initiate a deeper investigation into the characteristics of part-time farming families.

It became evident that entry direction would be the most useful characteristic to classify part-time farming families for this study. This classification was used to further the understanding of part-time farming by adding the dimension of comparison between urban, non-farming entrants and rural, full-time farming entrants. The framework for analysis which developed from the descriptive differentiation required, and the classification method used, can be depicted by outlining the comparative relationships.

In accordance with the analytical framework set forth, the similarities, differences, and overall characteristics of full and part-time farm families and part-time farm families from the two entry directions plays a major role in this research. Comparing characteristics of farm families will result in an analysis of differences to point out areas where policy implications require discussion. These characteristics form the basis of the empirical data needed to fulfill the objectives of this research. This type of descriptive exploration is necessary before further theoretical testing and explanatory analysis may be carried out.

E. Presentation of the Research Findings

The development and exploration of this research problem continues as follows: Chapter II contains a review of the literature, focusing on important concepts through a discussion of part-time farming at a macro-social level. This discussion includes trends, persistence of part-time farming, the relationship of part-time farming to agricultural structure, and a review of classifications and typologies of part-time farming. Chapter III discusses characteristics from the literature of part-time farming families at the micro or household level. Chapter IV presents the research methods used to obtain the empirical data required to fulfill the objectives of the research. Chapters V and VI present and discuss results. Chapter VII includes a summary of research results, discusses the implications of part-time farming for agricultural policy and extension programing in Alberta, and reveals areas where further research is required.

II. PART-TIME FARMING, A GENERAL REVIEW

A. Trends

Although part-time farming has been well documented as a component of agriculture around the world, material discussed in the literature shows that part-time farming has been increasing in industrialized nations and has come to be recognised as an important form of agricultural production in many countries (Fuguitt, 1977:1). For example, in Germany, in 1980, it was reported that 35% of all farms were operated on a part-time basis producing about one-third of the total agricultural output (Mrohs, 1982:377). In the United Kingdom, about 27% of all farmers were classified as part-time in 1978 (Gasson, 1982:355). In Japan, nearly 90% of all farm households have other sources of income and employment, of which 75% of farm family income is derived (Kada, 1982:367). In Spain, in 1972, 48% of all farmers had main jobs off the farm and their holdings were about 23% of the total agricultural land (Arnalte, 1982: 338). Over half of the farmers in the United States reported off-farm work in 1978 (Buttel, 1981:2) and in Canada, the trend towards increased part-time farming is well documented. Farm operators reporting off-farm work included 31% of the total in 1961 and 35% in 1971 (Bollman, 1978:5-23). By 1981 this percentage had risen to 38% (Statistics Canada, 1981:25). In 1971, farm operators with off-farm work produced over one-third of Canada's food (Bollman and Kapitany, 1981:1),

indicating the importance of the part-time sector in Canadian agriculture. These statistics, although not directly comparable because of differences in definitions between countries, show the extent of part-time farming in the agricultural industries of developed nations.

The increase in part-time farming in various countries over the last 50 years has been accompanied by a decrease in the number of full-time farmers. Samburgs, in a study of part-time farming in Sweden, determined that full-time farmers turned to farming part-time or left agriculture while the number of part-time farmers increased (Samburgs, 1979:160). In the United States, decreases in full-time farmers coincided with a 47% increase in the number of farmers who entered off-farm jobs between 1974 and 1978 (Anderson, 1977:3). These trends, increases in part-time farming and decreases in full-time farming, have also been reported in a wide range of countries including Austria, France and Belgium (O.E.C.D., 1978).

In Canada, the absolute numbers of farm operators with off-farm work increased throughout the years 1951 to 1971, while numbers of full-time farm operators declined. These figures indicate that instead of leaving agriculture altogether, farmers were allocating part of their labor resources to off-farm work activities (Bollman, 1978:5-25). Szabo analysed the decline in the prairie farm population between 1951 and 1961. His findings reflected those of Bollman and indicated off-farm employment was being used as

an alternative to leaving agriculture completely (Szabo, 1965:199). As stated in Chapter I, statistical trends in Alberta show a steady increase in part-time farming, reflecting general trends in Canada and other industrialized nations. Another trend evident in Alberta is the increase in full-time off-farm work.

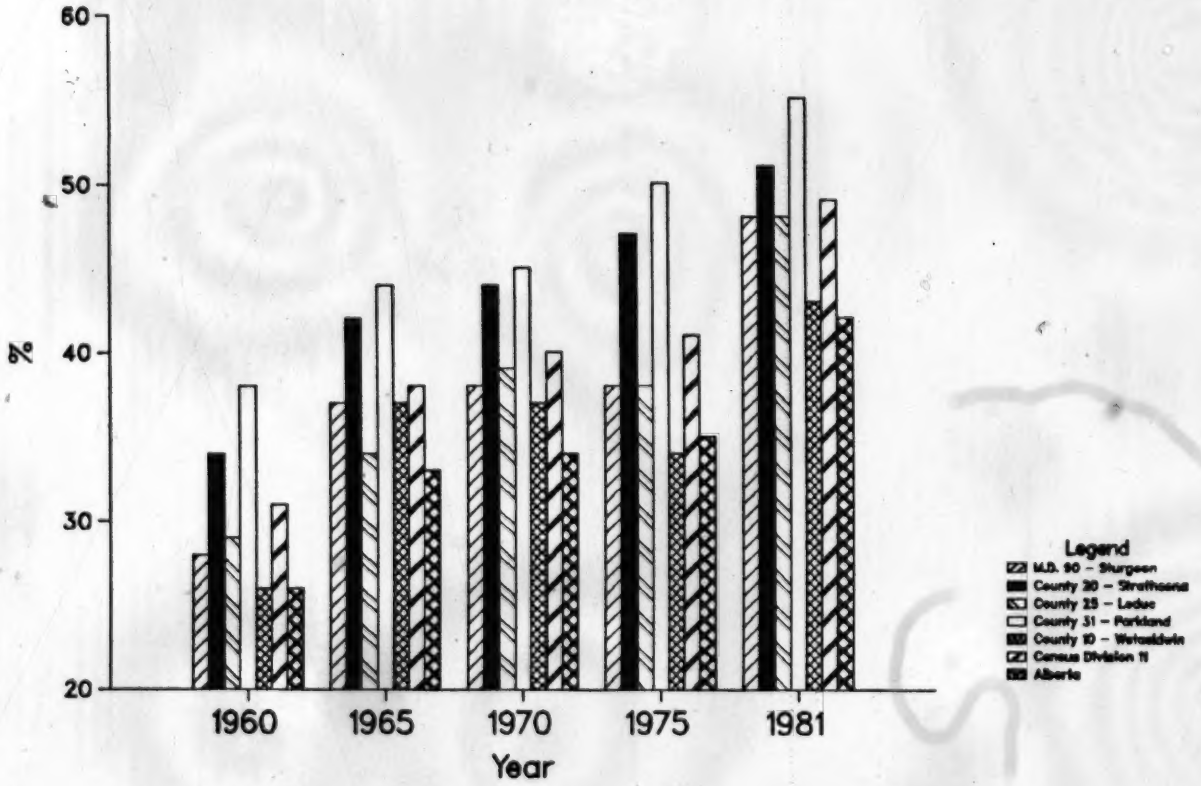
In Alberta, one of the highest rates of part-time farming exists in Census Division 11. Here, trends indicate a steady increase in part-time farming and full-time off-farm work for all of the counties and the municipal district included in the division. These trends are shown graphically in Figures II.1 and II.2, comparing the percentages of farm operators with off-farm work in the individual counties, the M.D., and the census division with Alberta percentages over the past two decades.

B. The Persistence of Part-time Farming

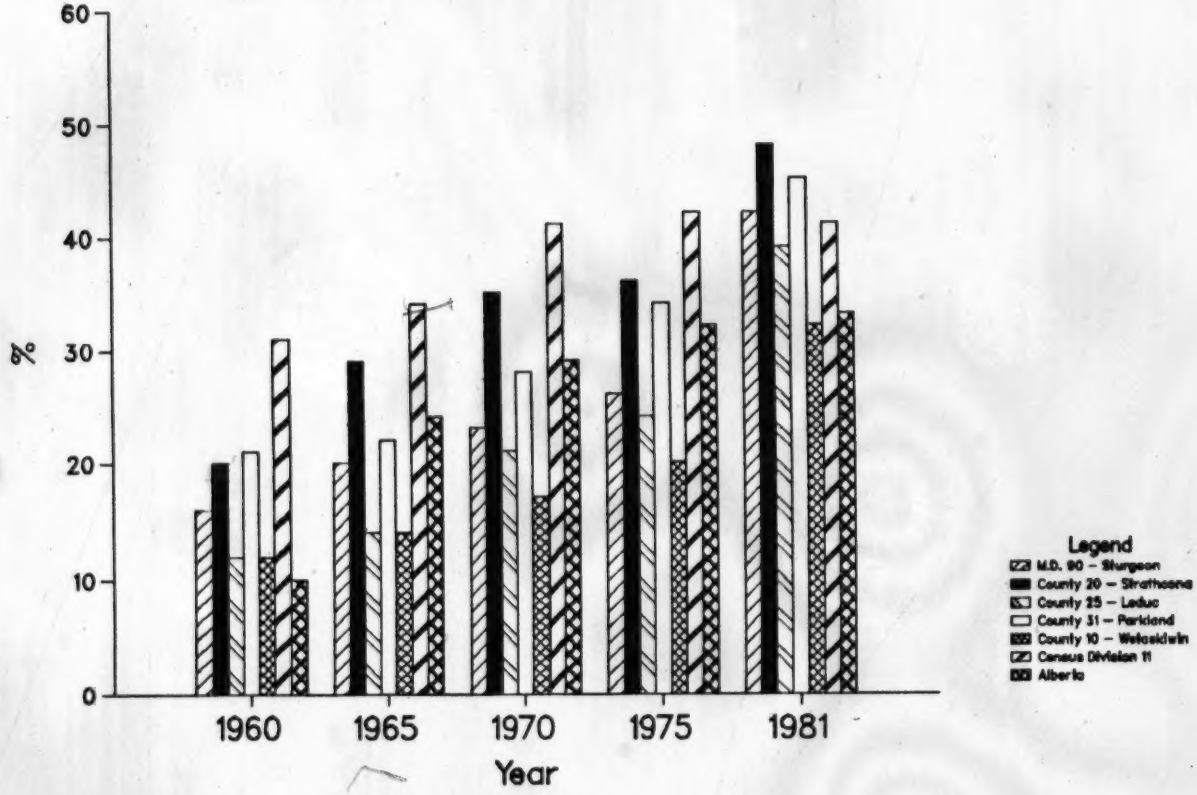
> *Part-time farming, however it may be defined, has become increasingly common in many rural settings in the last several decades, due primarily to increased opportunities for the farm population to work off-farm, technological advances in farming and changes in the value system in contemporary society* (Kada, 1980:xiii).

Kada has stated three reasons for the persistence and growth of part-time farming. The first, increased off-farm employment opportunities reflects a "pull" influence, allowing more and more farm families to take off-farm work. This "pull" influence, documented by Fuguitt in 1959 is accompanied by a "push" influence reflected in the second

Percent of Farm Operators Reporting Off-farm Work
Census Division 11, 1960 – 1981



Percent of Farm Operators Reporting Full-time Off-farm Work
Census Division 11, 1960 – 1981



reason, technological advances in farming. Farmers can be more productive in less time, thereby having more time to take advantage of off-farm work opportunities. The third reason, changing values, represents the urban entry direction where a strong desire to escape the city and live in the country has become recognised as a motivational force behind urban-rural migration (Fuguitt, 1963:348-49) and has added to the persistence of part-time farming as a way of life.

Buttel reflected Kada's opinions when he stated reasons for the persistence of part-time farming in the United States. His reasons:

1. *The differentiation process corresponding to growing inequality of landownership and agricultural wealth and the marginalization of many agricultural producers has forced many former independent agricultural commodity producers to acquire off-farm wage income in order to remain in agriculture.*
2. *Industrial decentralization has provided increased employment opportunities to farm populations.*
3. *Social and economic deterioration of these industrial cities has led many former urban dwellers to move to farms while continuing to hold off-farm employment* (Buttel, 1981:1).

Advances in technology have abetted centralization of agricultural wealth forcing, as Buttel has stated, many farmers into a part-time situation. Again, the "push" influence from the farm has been cited as a reason for the persistence of part-time farming. Off-farm job opportunities, the "pull" influence, and urban-rural migration related to changing social values are also repeated in Buttel's reasons for the persistence of

part-time farming.

Bollman has stated reasons for the persistence of part-time farming in Canada. These are:

1. *Technological changes have allowed farmers to obtain the same return with a smaller labor input.*
2. *Money and time costs of commuting to urban centers has decreased.*
3. *Farmers desire to achieve and maintain as high a standard of living as possible under the pressure of the cost-price squeeze on real farm incomes and have an increased awareness of urban lifestyles* (Bollman, 1979:42).

Bollman's reasons relate to the persistence of part-time farming cited by other authors, although from a rural perspective only. Researchers in Ontario, however, have noted the effect of urban-rural migration on the persistence of part-time farming and have indicated that entrants from an urban, non-farming direction constitute a major segment of the part-time farming sector, especially on the rural-urban fringe of metropolitan regions (Fuller and Mage, 1976; Mage, 1982; Troughton, 1976).

Is part-time farming a persistent segment of Alberta's agricultural industry? Part-time farming may be a response to increased job opportunities in the province creating a "pull" into off-farm labor for members of the farming community. The economics of farming and time-saving technological advances in the industry may be exerting a "push" into off-farm labor. As well, urban-rural migration may be another element adding to the persistence of part-time farming.

C. Part-time Farming and Agricultural Structure

The term "structure of agriculture" is used to describe the *organizational characteristics and complex relationships in the food and fibre production and distribution system* (Heffernan, 1982:337). Part-time farming is a part of the production sector and has an effect on the total system. How does part-time farming relate to agricultural structure?

> *It has been said that part-time farming is a transitional stage during which agricultural labor is transferred into the non-farm sectors and that part-time farming will disappear at a later stage of economic growth. But, statistical evidence shows that the reverse is true for most developing nations* (Kada, 1980:5).

Instead of being a transitional phase indicating a movement of labor out of agriculture, part-time farming has been associated with almost all farm enterprise types and is a part of agricultural structures in a wide range of rural socio-economic situations from peasant to industrial forms of organization (Bollman, 1979; Buttel, 1981; Frauendorfer, 1966; Fuguitt, 1961; Fuller, 1977; Mage, 1978). For example, in the United States, the trend towards increased part-time farming (previously discussed) has been related to structural changes in agriculture. Part-time farming appears to be replacing full-time farming in importance. A reduction in the number of full-time family farms and an increase in the number of small and part-time farms as well as an increase in the number of large-scale corporate farms has polarized agricultural structure in that country. (Buttel, 1981; Buttel, 1982; Fliegal, 1981; Goldsmidt, 1978; Havens,

1982). The disappearance of the mid-sized family farm...

> *yielded an agricultural class structure which is increasingly dualistic in nature...that is, characterized by a growing prominence in land and sales of very large farms and a persistent if not growing relative prominence in the number of very small farms along with a "disappearing" middle of medium-sized family farms* (Buttel, 1981:9).

Although it is not within the scope of this research to determine the effects of part-time farming on agricultural structure, it is necessary to point out that, in general, the increases in part-time farming may be related to changes in Alberta's agricutural industry.

Farm size and farm sales are two characteristics which reflect changes in agricultural structure. If part-time farming is replacing full-time independent commodity production in Alberta, the accompanying changes in farm size and sales would be evident. A brief examination of changes shows that the agricultural structure of Alberta is characterized by a growing number of smaller (1 - 69 acre) farms and a growing number of large (over 760 acre) farms with reductions in the number of mid-sized (70 - 759 acre) farms (Alberta Agriculture, 1981:23). Farm sales classes reflect this trend with increases in the smaller and larger sales classes and decreases in the middle sales classes (Statistics Canada, 1981). The researcher was unable to find literature pertaining to the effect of part-time farming on the agricultural structure of Canada or Alberta. However, because of the increase in part-time farming in Alberta, it is important to understand that part-time farming may have

an effect on the nature of agricultural structure.

D. Part-time Farming, Classifications and Typologies

Various researchers have attempted to classify part-time farming. These situations range on a...

> *continuum from individuals who work full-time at a non-farm job and have a small agricultural holding which happens to be classified as a farm, to the other end of the spectrum where we have a "bonafide" full-time farmer who happens to appear as a part-time farmer because of some inconsequential activity in the non-farm sector (Bollman and Kapitany, 1981:2).*

Obviously, in terms of understanding the nature of part-time farming, a classification system is necessary as the extremes of the continuum implyed in the above quotation could not be considered the same when determining policy implications. Part-time farming families are heterogenous and various classifications have been suggested using information gained from empirical research. For example, Anderson (1979), used the number of days of off-farm work and income from farm sales to classify part-time farming families. Donahue (1957), used the extent of off-farm work to classify the population under study. Other classifications have included size of holdings as well as other income and time dimensions.

Bollman and Kapitany (1981), devised a classification system which included the farm operator's labor time off the farm and farm output in terms of gross farm sales. This system, however, includes only the farm operator's off-farm work, effectively eliminating contributions of the spouse.

Also, the system does not show the relative importance of farm sales vis-a-vis off-farm income which would indicate the importance of both income sources to the farm family.

A typology revealed in the literature which vastly improved the understanding of part-time farming at the time was that of Fuguitt (1961). He based a typology on past, present, and future commitment to the farm and the non-farm occupations. As well, he associated commitment with motivation to farm. Motivation to farm and motivation to work off the farm reflected the degree of commitment to the farm and non-farm occupations. The degree of commitment determined the extent of and type of part-time farming which resulted. This typology, furthered by Mage, was used to classify empirical results found in an Ontario study (see Figure II.3).

Kada (1980), used two criteria to classify part-time farming situations. These were the existance or non-existance of urban-rural migration within the generation of the present farm operator and past career pattern (farming and non-farming) of the farm operator. These criteria resulted in four subgroups outlined in Table II.1.

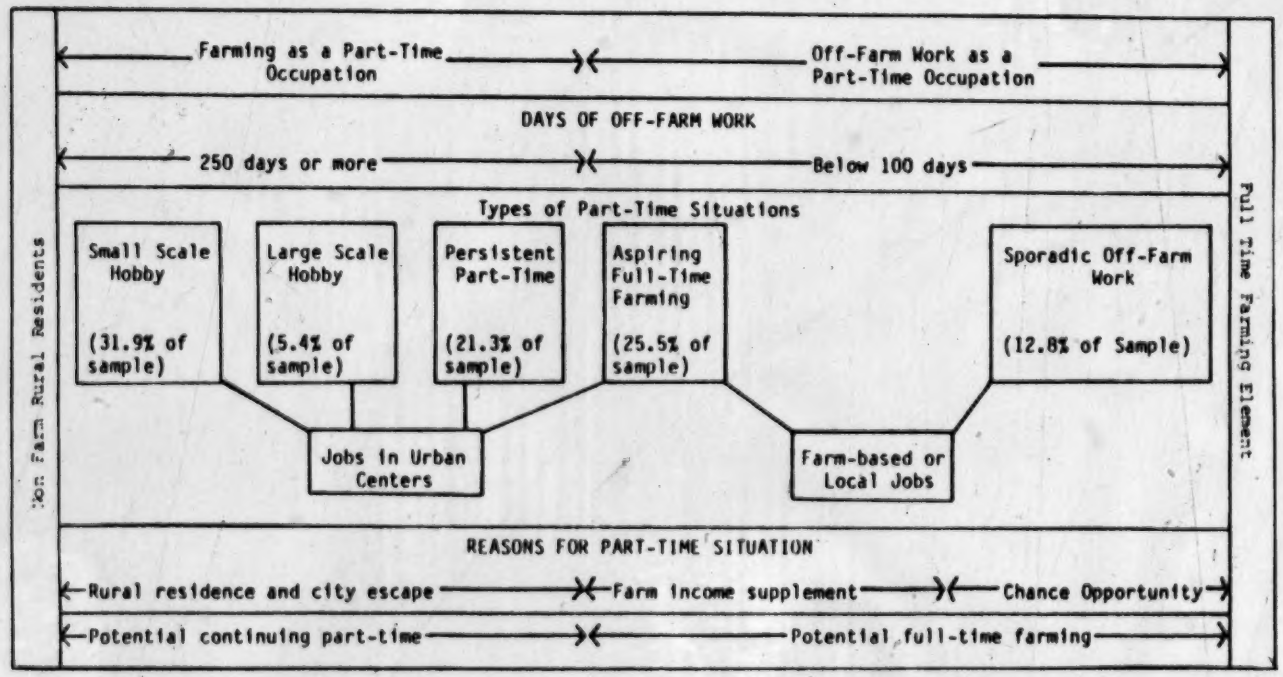
The rural entrant type "A1" was raised on a farm, previously resided on a farm and had been farming full time before taking off-farm work. Rural entrant "A2", had a similar residence background but had previously been involved in off-farm work. Urban entrant "B1", was raised on a farm, had previously lived in a city and returned to

TABLE II.1

A TYPOLOGY OF PART-TIME FARMING
(Kada, 1980:65)

TYPE	PREV. RESID. PATTERN	PREV. CAREER OF FARM OPERATOR	NO. OF FARM FAMILIES (n=193)	PERCENT %
Transitional A 1	Rural-Rural	Farming Only	77	(39.9)
Persistent A 2	Rural-Rural	Farming And Non Farming	59	(30.6)
U-Turn B 2	Rural-Urban-Rural	Farming And Non Farming	33	(17.1)
Entrant B 1	Urban-Rural	Non Farming Only	24	(12.4)

Figure II.3
A Typology Of Part-Time Farming (Mage, 1976:32)



farming while maintaining off-farm work. Urban entrant "B2", had no rural residency background and no past experience with farming.

These classifications and typologies are important links between the gathering of empirical data and the theoretical understanding of part-time farming. Although it is not within the scope of this research to develop a typology of part-time farming, an examination of typologies and classifications previously used assist in directing research and may be useful as comparative tools.

III. SELECTED CHARACTERISTICS OF PART-TIME FARMING FAMILIES: INDICATIONS FROM THE LITERATURE

A. Social Characteristics

Location in the Rural-urban Fringe

Through empirical studies it has been determined that more part-time farming families live closer to the city than full-time farming families (Donohue, 1957; Fuguitt, 1963; Gasson, 1966; Jones, 1958; Mage, 1974; Troughton, 1976; Waldo; 1963). This has been explained by an increase in the number of smaller (part-time) farms near the city which resulted from the influence of urbanization (Waldo, 1963) and proximity to off-farm job opportunities in the city. The determination of location of part-time farming families in the rural-urban fringe of Edmonton will point out the extent of urban influence on the increase in part-time farming in this area.

Age and Education

> *In the long run farm operation, the labor capacity of a farm family changes over time corresponding to the life cycle of the farm operator ...off farm employment may be considered as an effective means to adjust to the biological aging process of the family farm* (Kada, 1980:4).

In the family farm, labor is mainly provided by family members. However, family labor supply changes over time as the family grows and the farm operator adjusts to this by changing the size of the farm, or the farm operation or

substituting capital (off-farm wages) for his own labor on the farm (Williams, 1981; Kada, 1980). The role of off-farm employment in the family cycle, then, is that it smooths out income fluctuations over the life of the family. Part-time farming, if prevalent in the early stages and the latter stages of the life cycle only, can be an indication of the use of part-time farming as an entry and exit vehicle, into and out of farming (Bollman and Kapitany, 1981a; Hathaway and Waldo, 1964). If, however, part-time farming is prevalent throughout all stages in the life cycle, it can be thought of as a more persistent way of life (Perkins, 1972).

Family cycle stages can be represented by age groups of farm operators (Hathaway and Waldo, 1964). For example, at 20 - 30 years a farm operator can be thought of as being in the "Family Establishment Phase". The decade from 30 - 40 can be representative of the "Child-bearing and Child-rearing Phases", 40 - 50, the "Child-launching Phase", 50 - on, the "Middle Age and Aging Phases" (Mahan, 1964:2-3). The age groups of operators was used to represent family cycle stage for this research. Consequently, it can be determined in which family cycle stage part-time farming is most prevalent.

Generally, the amount of education attained has an impact on a person's career. It is likely that maintenance of a professional career would have a stronger influence on the extent of off-farm work than would maintaining an unskilled or semi-skilled position off the farm (Heffernan,

1982). Education levels would also influence the decision to take or maintain an off-farm job as the extent of capital generated from off-farm work would be inversely related to the return to labor on the farm (Bollman, 1979). Therefore, educational levels of farm operators and spouses have an influehce on extent and kind of off-farm work and in turn will have an impact on the farming operation.

B. Future Farming Plans

Future plans are important to note even if the plans are only anticipated. Although actual future occupational status cannot be measured without a longitudinal study, future plans influence present decisions and can be used as predictors of future occupational status (Fuguitt, 1977:12). For example, if a part-time farmer planned to be farming full-time in the near future his farming decisions would be focused on increasing productivity. Conversely, if the same farmer planned to remain in a part-time farming position he may be more inclined to maintain the same level of farm productivity in the absence of incentives to increase that productivity level.

The expected future occupational status of those involved in part-time farming also gives an indication of the persistence of part-time farming in an area (Fuller, 1976). If farmers in a part-time situation plan to remain in that situation in the foreseeable future, it is an indication that part-time farming has become an end in

itself, a way of life. Conversely, if full-time farmers plan to be farming part-time in the near future, this may indicate a reduced level of confidence in their ability to make a living from farming.

C. Use of Extension Services and Information Sources

It has been noted that part-time farming families make less use of extension services than full-time farming families and that *part-time farmers who formerly were full-time farmers are more likely to have contacts with extension than those who formerly were full-time non-farm workers* (Fuguitt, 1965:49). This lack of contact by part-time farming families may be caused in part by the following: the hours of work of extension personnel are usually the same as those working off the farm. Because of this, the informational needs of part-time farm families may be met through other sources such as media, neighbors, etc. (Hillman, 1956). If, however, one of the goals of institutions involved in agriculture is to increase farm productivity, traditional extension services may require some alterations to meet the needs of part-time farmers. For example, the reaction of a recognised extension educational center to this specific demand has resulted in short courses and publications directed at the urban entrant to part-time farming in Ontario. [1]

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[1] Ontario Ministry of Agriculture and Food, 1980. *Information for Beginning and Part-Time Farmers.* Pub. 61. Agdex 813.

Previous research indicates that part-time farmers may be thought of as clientele of extension services in that there may be opportunities with this group that are absent in the full-time farming sector. As Pieroni has stated:

> *The outside-agricultural activities of some members of the family do not reduce the overall intensity of labor utilization on the farm, but rather these outside activities aid in the overcoming of traditional ways of farming, and favor the acquistion of innovations concerning the productive activity. Part-time farming families have access to a cultural and technical socialization which is more developed than in full-time farming families which are, on the contrary, more traditional and less skillful. This difference probably comes from the experience and the know-how that part-time workers can acquire from their employment in industrial or urban contexts* (Pieroni, 1982:334).

As evident from this discussion, the special circumstances of part-time farmers, whether from a urban or rural background, necessitate consideration when developing extension service policies.

D. Reasons to Farm and Reasons to Work Off the Farm

Wayt (1959) found that economic reasons were not the only motivational forces influencing the decision to enter into a part-time farming situation. In a study in Ohio, the main reasons found for part-time farming were, in order of importance: country living, security, more cash income, and to get a start in farming. He found that the emphasis people gave to particular reasons to farm part-time depended somewhat on whether they were former full-time farmers or former urban residents.

The decision to take off-farm employment by members of the farm family is influenced by a number of factors, both internal and external to the farm itself. These internal influences, according to Kada (1980) are: the nature of the farm operation (farm size, type of operation, net farm income, possibility of expansion); availability of family labor (family size, family composition, education and job skills); life cycle stage (age of operator, number and ages of children); aspirations and goals of family members (retirement, continuation of the family farm, etc.). External influence include: off-farm employment opportunities; the opportunity cost of labor between on-farm and off-farm employment, non-agricultural demand for land and farm technology (Kada, 1980:3). These influences are related to Fuguitt's "push-pull" hypothesis in which the extent of part-time farming is directly related to the extent of off-farm employment opportunities and inversely related to the extent of opportunities in agriculture. Fuguitt's "push" factors include: insufficient farm income; inability to expand farm size; labor saving farm technology; availability of custom farm work; more active participation of farm women in the labor force and higher levels of education of farm family members. "Pull" factors relating to the decison to take off-farm work are, according to Fuguitt: increased off-farm employment opportunities for rural populations due to industrialization and urbanization; development of transportation systems; reduced commuting

time; mass media systems which have increased information flow about off-farm opportunities; changes in labor practices such as shorter work hours, paid vacations, improved labor conditions,and aspirations to an improved standard of living.

These factors which influence the reasons to farm part-time play an important role in decision-making for entrants from full-time farming positions. However, from a non-farming position other factors play a part in determining the reasons to farm part-time. These factors are both economic and non-economic. Economic factors include: increased income for the family, financing farm inputs, reducing farm debts, reducing food costs for home consumption, lower living costs, the gain from land value appreciation and in some cases tax benefits (Gasson, 1982:355). Non-economic factors include: psychic values placed on rural living, distaste for city life, the desire for more self-sufficiency,and individual determination (Buttel, 1981:3).

Entry direction may be related to reasons to farm part-time. From a full-time farming direction of entry, the reasons to farm part-time are mainly economic (Tubman, 1977:210) and, as Kada has stated: *To supplement the low farm income and to overcome the problem of income fluctuations, income from off-farm employment has apparently been an answer at least for many smaller-size farmers* (Kada, 1980:35). From an urban non-farm entrance position,

motivating factors appear to be more of a psychological nature related to the desire for country living and the dislike of a city environment. As Gasson (1966) indicated, new entrants from an urban center do not rely on farm incomes for their living. This was supported by Kada's results which showed that the majority of urban entrants did not intend to make a living solely from farming (Kada, 1980:99).

Why should the reasons for farming part-time be determined? How important are these reasons? Fuller, in 1976, stated that:

> *The motives for part-time farming are thus the key to understanding the nature and origin of the resultant problems, be they associated with the adjustments of physical and human resources, economic costs or psychological stresses that emanate from a changing rural system* (Fuller, 1976:38).

The importance of what motivates an individual to farm part-time was discussed at a recent seminar on agricultural education in Alberta...

> *we need to understand the motivations of people engaged in agriculture if we are to help in successful adjustment to change whether they are engaged in agriculture on a full-time or part-time basis* (McAndrews, 1981:13).

The determination of motivations or reasons to farm part-time plays a very important role when discussing the policy implications of the increase in part-time farming.

E. Adjustments

Some of the adjustments made at the farm level to accomodate the off-farm job have been noted to be: to work harder and work longer hours, to get help from family members, hire custom operators or sharecrop, and change the farm operation (Kada, 1980:104). Other adjustments noted have included: hiring labor, renting out farmland, and exchanging labor. The types and extent of adjustments made at the farm level are different for various situations, but the knowledge of which adjustment prevailed in a study area would indicate how people cope with the demands of the off-farm job.

Adjustments to the off-farm job made to accommodate farming were, in the literature, found to be fewer than adjustments made to the farm operation, reflecting the relative inflexibility of most off-farm employment opportunities. Some part-time farm families have found work with flexible hours, some use paid vacation time and some have been found to work non-regular shifts or to make arrangements for time off (Kada, 1980:105).

IV. RESEARCH METHODS

A. Data Required for the Study

In order to determine the nature and extent of part-time farming on the rural-urban fringe of Edmonton, it became necessary to examine the characteristics of farming families. Empirical data from these families had to be gathered in a fashion which allowed for the compilation of general characteristics. This chapter details the procedures followed in obtaining the data needed for this study.

Information was obtained at the micro or farm family level. The data required pertained to: social, economic, and farm production characteristics; future farming plans; problems; information sources and use of extension services; off-farm work characteristics; reasons to farm and reasons to work off the farm; and, adjustments made by part-time farming families. A detailed outline of the information required from farm families follows:

1. SOCIAL CHARACTERISTICS
    a. Location on the rural-urban fringe
    b. Age of operator
    c. Age of spouse
    d. Educational level of operator
    e. Educational level of spouse
    f. Rural or urban background of operator
    g. Rural or urban background of spouse
    h. Previous occupation of operator

i. Previous residence of operator

2. ECONOMIC CHARACTERISTICS
   a. Gross farm sales of the previous year
   b. Percent of total family income from farm sales
3. FARM PRODUCTION CHARACTERISTICS
   a. Length of time in present operation
   b. Size of farm, acres owned
   c. Size of farm, acres rented out
   d. Size of farm, acres rented from others
   e. Type of enterprise
   f. Value of farm sales from enterprise types
   g. Use of credit sources
4. FUTURE FARMING PLANS
   a. Five years
   b. Ten years
5. PROBLEMS
   a. Related to the farm operation
   b. Related to off-farm work
   c. Related to family and community
6. INFORMATION SOURCES AND USE OF EXTENSION SERVICES
   a. Importance of information sources
   b. Extent of contact with extension services
7. OFF-FARM WORK CHARACTERISTICS
   a. Extent of off-farm work
   b. Occupation of operator
   c. Occupation of spouse
8. REASONS TO FARM

9. REASONS TO WORK OFF THE FARM
   a. Operator
   b. Spouse
10. ADJUSTMENTS MADE
   a. To the farm operation
   b. to off-farm work

B. The Research Population

Unit of Analysis

The farming family[2] has been chosen as the unit of analysis for this study as it was determined that the family is the most revealing source of information pertaining to part-time farming. Buttel included the family in his definition of part-time farming and emphasized the family division of labor when he stated:

> *Part-time farming thus represents a division of labor within the family in which one or more members of the household (who may or may not include the farm operator) works off the farm while other family members assume farm-related tasks* (Buttel, 1981:3).

Fuguitt also stressed the importance of the family as the unit of analysis when he stated that *the family is the unit of consumption and is the social group involved in making a living, hence it is important to take into account the family division of labor in farm and other economic activities* (Fuguitt, 1977:29). Kada (1980) used the family

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[2]A family is *a group of individuals having a common dwelling unit and related by blood, marriage or adoption. Unattached individuals living by themselves are treated as single member family units* (Darcovich and Mouelhi, 1976:1).

as the unit of analysis and determined that examination of the family division of labor is a useful way to increase the understanding of part-time farming. The part-time farming family concept is perhaps most valuable as a means towards understanding the position part-time farming holds in the agricultural structure of a region. As Kada has stated:

> *the farm family plays a primary role in determining methods of welfare maximization and resource allocation, eg., allocation of farm labor between on-farm and off-farm employment. The farm family is not only a consumption unit but also an important decision-making unit for factor supplies and resource adjustments* (Kada, 1980:2).

Thus, the farming family is the most useful unit of analysis and is utilized for this research.

Geographic Area of Study

Census Division 11 was chosen as the geographic area of study for this research and includes County 10 (Wetaskiwin), County 20 (Strathcona), County 25 (Leduc), County 31 (Parkland), Municipal District 90 (Sturgeon), and Edmonton. This division contains areas far from, as well as close to Edmonton, providing for any differences which may result from variables of distance from an urban center (see Appendix A).

This area which has some of the best farmland in the province, has soil types ranging from grey wooded in the western part of the county of Parkland to dark brown luvisols and black chernozems in the counties of Leduc and Wetaskiwin. Geographic formations range from glacial

morraine in Strathcona to marine lake beds and flood plains in Leduc, Parkland and Sturgeon. Oil fields and gas plants, refineries, processing plants, and the city itself provide off-farm employment opportunities.

Situated in central Alberta, 762,041 people reside in Census Division 11 (1981). An urban population[3] of 662,632 resides in Edmonton and nearby sattelite towns and cities. For example, the city of St. Albert, towns of Leduc, Wetaskiwin, Fort Saskatchewan, Spruce Grove and Stony Plain plus various bedroom communities such as Morinville and Beaumont all have urban populations. As well, a rural population of 99,409 resides on farms and in small agricultural service communities in the Census Division.

The Universe

The initial universe for this research included all part-time farming families in Census Division 11. It was expected that this universe would contain families entering from an urban, non-farming direction and from a rural, full-time farming direction.

However, identifying these people was a very difficult task. A preliminary attempt using municipal tax lists and a sample based on size of holding was undertaken. This method, however, had severe limitations, not only because of the different methods of classifying farm land between the

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[3] Urban population refers to *persons living in an area having a population concentration of 1,000 or more and a population density of 400 or more per square kilometre* (Statistics Canada, 1981:vii).

counties, but because of the logistics involved in picking a sample from these lists. A tax list was bought from the County of Parkland and attempts were made to screen the possible part-time farming families. It became evident that this time consuming task would result in finding a very small number of part-time farming families. Identification in each county would be difficult as two of the counties had not yet converted to a computerized file system.

A second attempt to obtain a universe of part-time farming families was tried using an area cluster sampling method. Again, the limitation of a small number of usable results compared to the cost of the research precluded this technique.

Finally, it came to the researcher's attention through conversation with Dr. R. Bollman that Statistics Canada could release a randon sample of the universe if the sampling parameters were within the confidentiality limitations placed on information kept by this institution. Unfortunately, one limitation was that the entire universe could not be released. This source, although posing many restrictions on the research, was chosen as the most practical. The Agriculture Statistics Division of Statistics Canada was contacted and agreed to generate a random sample of census farm[4] operators reporting days of off-farm work in 1976. The sample, however, because of confidentiality

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[4] A census farm *is a farm, ranch or other agricultural holding of one acre or more with sales of agricultural products during the year 1975 of $1,200 or more* (Statistics Canada, 1978:v).

restrictions, included census farm operators who did not report any days of off-farm work resulted in a universe containing all census farm operators in Census Division 11. For this reason, the research objectives were expanded to include full-time farming as indicated in Chapter I.

Another limitation of this source was the inability of the researcher to access farm taxfiler[5] information because of institutional restrictions on this information. This unfortunately may have led to the omission of many unban non-farm entrants and biased the sample in favor of full-time farming entrants.

C. Sampling Procedures and Stratification of the Sample

From a universe of 6,730 census farm operators from the 1976 Census of Agriculture who owned land or resided in Census Division 11, a random sample of 3,953 names and addresses was generated. This sample was then used as being representative of the universe for this study and became a frame[6] from which the survey sample was drawn. At the request of the researcher, agricultural corporations and institutional census farms were excluded from the sample. The sampling frame was numbered and an initial random number list containing 1000 numbers between 0 and 4000 generated by computer was used to select the survey sample. Another set

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[5] Farm taxfilers *are defined to include all individuals who report income from farming on their tax returns* (Gellner and Birks, 1977:1).

[6] A sampling frame is *the actual list of sampling units from which the sample, or some stage of the sample, is selected* (Babbie, 1973:81).

of 500 random numbers from 1 to 4000 exclusive of the first set was generated by computer to be used as replacements for the second mailing. Because the sample was obtained from a 1976 list, it was assumed that there would be a number of returned questionnaires from the first mailing.

To ensure a representative survey sample, it became necessary to stratify the sampling frame and the survey sample according to significant components. The following discussion outlines the stratification procedures used for this study.

Type of farm enterprise is a component of part-time farming. Decisions made about type of enterprise undertaken by part-time farming families are affected by seasonal and daily demands of the enterprise, distance to commute to the off-farm job, and the availability of other family members to assist in the enterprise. Certain types of farming operations may be more easily carried out while maintaining an off-farm job. For example, grain farming would be more compatible with a full-time off-farm job than dairying.

The sampling frame contained information identifying each type of enterprise for the census farm operator listed. The sampling frame was classified by type of enterprise to determine the percentage in each enterprise. Table IV.1 shows the enterprise type and the percentage of each type in the sampling frame.

Another important component of part-time farming is proximity to an urban center. From information gathered in

TABLE IV.1

PERCENTAGES OF ENTERPRISE TYPES IN THE SAMPLING FRAME
AND IN THE SURVEY SAMPLE

ENTERPRISE TYPE	PERCENT	
	Sampling Frame	Survey Sample
Dairy	16.98	16.30
Beef	37.28	37.10
Hogs	4.00	4.50
Poultry	1.75	1.40
Wheat	3.90	4.80
Sm. Grains, Oilseeds, Cereals	21.98	21.50
Other Field Crops	.59	.49
Fruits And Vegtables	.06	.13
Miscellaneous Specialty	1.85	2.09
Mixed Livestock	7.02	7.71
Other Mixed	.96	.72
Type Non-assigned	3.39	3.00
TOTAL	100.00	100.00

the literature, it was expected that nearness to an urban center and the off-farm job opportunities would have some influence on the extent and kind of part-time farming carried out. For this reason, the sampling frame was stratified according to distance from Edmonton. Three concentric circles were arbitrarily drawn around Edmonton, creating four zones (see Appendix A).These zones were termed "Near" (0 - 18 miles), "Mid" (18.1 - 36 miles), "Far" (36.1 - 54 miles), and "Very Far" (54.1 - 72 miles). The classification of the sampling frame resulted in percentages located in each zone as indicated in Table IV.2.

The survey sample was also classified according to enterprise type and distance from Edmonton. Percentages in each classification grouping were not different from the sampling frame as shown in Tables IV.1 and IV.2, indicating the survey sample adequately represents the frame from which it was drawn.

D. Sources and Procedures for the Collection of Data

Information was gathered from the literature according to selected characteristics. As well, unpublished information regarding part-time farming was obtained from various sources. Informal interviews were held with extension, municipal personnel, government representatives, and part-time farmers.

It was determined that survey research methods were required to obtain the micro-level data needed for the

TABLE IV.2

PERCENTAGES OF THE SAMPLING FRAME AND THE SURVEY SAMPLE IN EACH DISTANCE ZONE

DISTANCE ZONE		PERCENT	
		Sampling Frame	Survey Sample
Near	(0.00 - 18 miles)	25.40	24.80
Mid	(18.1 - 36 miles)	37.79	37.80
Far	(36.1 - 54 miles)	27.49	26.70
Very Far	(54.1 - 72 miles)	9.32	10.70
TOTAL		100.00	100.00

study. Data from farming families, both full-time and part-time were collected in two sequences, a mailed questionnaire and an interview.

Design and Construction of the Questionnaire

The survey instrument was designed over a period of six months and involved the input of government, university personnel, and part-time farmers. The questionnaire was refined and altered a number of times. The finalized instrument used for the first mailing is included in Appendix B. A cover letter was developed and included in the mail package with a self-addressed stamped return envelope (see Appendix B).

The questionnaire began with an introduction and proceeded with questions determining farming and non-farming history.

Question six determined the order of importance of reasons to farm. The reasons, were chosen from the literature and from pretesting with part-time farmers. It was decided that instead of asking respondents to number all of the reasons in order of importance, only the three most important reasons would be rated, thus eliminating coding difficulties.

Questions twelve and thirteen were introduced with a short statement explaining the purpose of the next segment of the questionnaire. Adjustments to the farm operation and adjustments to the off-farm job were obtained from the

literature and from pretesting. The respondents were asked to indicate which adjustments applied to them, no valuation was intended. Question thirteen asked the respondents to rate the 3 most important reasons, in order of importance, for doing off-farm work.

Question fourteen was designed to determine the future plans of those farming full and part-time. It was aimed at determining the persistence of the part-time situation and the direction people wanted to move within the next 5 and 10 years.

Questions fifteen and sixteen were piggy-back questions. At the request of the agency funding this research, these questions were included. Using attitude and perception questions regarding farming as an occupation and a way of life, this Likert scale design fitted into the questionnaire with very little disruption to the flow or focus.

Gross farm sales and percent of family income from farm sales were obtained from questions twenty and twenty-one. Income can be a sensitive subject with survey respondents, especially among a rural population. For this reason, income enquiries were kept to a minimum. The use of a percentage technique revealed the degree of dependence on the farm operation and was sufficient to meet the research objectives.

Using a Likert scale, the importance of information sources to the respondents was revealed. Sources to be used

were determined through discussion with extension personnel and from the literature. Question twenty-three revealed the extent of contact with various extension services.

Question twenty-six, a Likert scale, revealed the relative importance of selected problems relating to the farming operation, off-farm work, and family and community life.

The last page of the questionnaire contained questions regarding personal information (age, education, children, background, etc).

Also on the last page was a screen question identifying which member of the household filled out the questionnaire as well as ample space for comments.

Questionnaire Testing and Administration

The questionnaire was pretested initially in the form of an interview. One district agriculturist, four known part-time farmers and one known full-time farmer were interviewed. The procedure of pre-testing in the form of an interview was done to permit a better determination of potential problems. Confusion arising from the pre-test was immediately apparent. Many of the questions were pre-tested as open-ended in an effort to determine appropriate responses for what would eventually be closed ended questions.

The second pre-test, done after a considerable amount of refinement to the questionnaire, was administered

personnally, but the respondents were requested to complete the survey instrument by themselves. The researcher was there, however, to answer any questions. The respondents chosen for the second pre-test included two known part-time farmers who had participated in the initial pre-test and two unknown part-time farmers suggested by district agriculturists. The two known part-time farmers were former full-time farmers who had taken off-farm jobs while the two named part-time farmers were former city dwellers who had recently (in the past ten years) moved to the country to farm.

The respondents' names and addresses were printed on labels generated by computer and affixed to the cover envelope. After refinement of the questionnaire, it was mailed with the covering letter, and a stamped, self-addressed return envelope. The second mailing, designed as a reminder to the first mailing, was mailed three weeks after the first. Further discussion of the second mailing is contained in the section dealing with reliability and validity of empirical data in this chapter.

The Interview Schedule

The same instrument was used for the interview schedule and administered to part-time farming families during the period between the first and second mailings. The purpose of the personal interview was to allow the researcher to gain an in-depth look at part-time farming. Results from the

interviews were included with results from the mailed survey. Additional comments, however, and research notes were used as an aid in explaining and interpreting results. Altogether, ten personal interviews were completed, five of these were chosen at random from the sample frame using a random number set of forty. Respondents chosen were contacted by telephone and asked for an interview appointment. Full-time farmers selected were replaced with another respondent from a random number set of twenty. The random number sets were generated at the beginning of the survey and all were mutually exclusive. Five other part-time farming families were selected by asking district agriculturists to name part-time farmers known to them. These named respondents were contacted by telephone and an interview appointment arranged.

E. Reliability of Empirical Data

Through pre-tests, the questionnaire was validated to determine that the information generated would be beneficial, and that the questions would, in fact, elicit the correct responses. The questions, during pre-testing, were constantly improved so that they would be clear to the respondents. Questions (if any) which failed to elicit a response because of ambiguity were removed from the survey instrument. Examples of improving the reliability follow: In questions such as number six, there was a possibility respondents would check all of the answers rather than one

answer (initially specified). This occured in pre-testing. For this reason, the question was altered to include only the three most important choices. Questions ten and eleven, parts three were altered from a yearly scale to a seasonal scale after pre-testing determined that many farmers and their spouses worked only during a certain part of the year. A seasonal determination of off-farm work produced results that were more reliable as the respondents were better able to answer the question. The questions which were attitudinal in nature were designed as Likert scales to increase the variability among answers as much as possible. It was not essential to test the variability; the research design required descriptive analysis only. As it was, the multiple response scaled questions included categories of responses which were mutually exclusive except in the case of questions fourteen and twenty-four where multiple answers were expected and allowed.

Response rates were affected by a variety of circumstances. First, the mailing of the initial questionnaire coincided with seeding. Secondly the economic climate seemed to result in a negative atmosphere not conducive to cooperation in a survey. Many farmers, already experiencing high interest rates and operating expenses, coupled with a decline in beef prices, tended to be unenthusiastic toward a questionnaire. These explanations were determined from the comments which respondents made on the last page of the questionnaire. Another factor affecting

response rates was mobility. Fifty-three questionnaires from the first mailing were returned undelivered as the respondent was deceased or had moved. It was assumed that other questionnaires may not have been returned for the same reasons even though they may have been delivered.

The most influential factor affecting response rates was the use of the term "part-time farming". This term was used as a heading for the first mailing and it came to the researcher's attention through subsequent interviews that the term had a derogatory connotation among many of the respondents. Although this was not evident in the pretest, the term implied a "failure" at farming or "hobby farming" with a strong negative bias. As an informal test to determine if this indeed was so, the term was omitted from the second mailing. Other changes included replacement of undelivered questionnaires from the first mailing with respondents randomly selected from the second list of 500 random numbers. All respondents and replacements for the second mailing were screened by looking up addresses in the phone directory. It appeared that these changes affected the response rate, as the rate for the first mailing was 17% and for the second mailing, 14%, boosting the total response rate to 31% (271 usable questionniares). The second mailing increased the response rate by 82%.

As already indicated, the response rate, 31%, was low. Due to the economic climate, etc., the willingness to respond was expected to be low. Considering that the subject

of the survey may not have been topical or exciting to some respondents and that the target population was rural, the researcher feels that this was an adequate response rate from which to gain an increased understanding of the extent and nature of part-time farming. Definitive statements of the research population, however, cannot be made with such a low response rate.

Another area affecting the reliability of results was the method of sample selection. The method eliminated potential respondents fom an urban entry position. Not all entrants who are farming part-time are classified as census farmers in the 1976 census of agriculture but are classified as farm taxfilers. For this reason, results are biased toward the full-time farming entrant who had previously been a census farmer. These factors must be taken into consideration when drawing conclusions from the empirical data.

F. Procedures for Analysis and Interpretation of Data

The questionnaire was coded and results tabulated. Frequencies and averages for the entire sample were computed. The researcher analysed and compared relationships between full- and part-time farming families with respect to: social, economic, and farm production characteristics, future farming plans, problems, information sources, and use of extension services. Part-time farming families were then classified according to entry direction (i.e., urban-based,

non-farming and rural-based, full-time farming). Selected social, economic, and farm production characteristics of part-time farming families were analysed and compared. As well, a comparison between different part-time farming families was carried out with regard to the characteristics of off-farm work, reasons to farm, reasons to take off-farm work, and adjustments made to accomodate off-farm work.

Social, economic, and farm production characteristics were tested using a chi-square goodness of fit which required only nominal or ordinal level data. Although many of the independent variables were at the interval or ratio level, they were collapsed into open-ended or non-equal classes for the purposes of description. Also, the differences found in many of the comparisons were large enough to be tested for significance using the chi-square and did not require more rigorous testing.

In some of the comparisons of social, economic, and farm production characteristics between urban, non-farming entrants and rural, full-time farming entrants, the cell sizes were too small to be significant.

The Likert scales, however, were treated as interval data and the difference of means between part-time and full-time farming families were tested using an F statistic (Melnyk, 1977:128-134).

The Spearman rank-order correlation coefficient was used to measure the degree of relationship between types of part-time farming families and operators and spouses with

respect to reasons to farm and reasons to work off the farm.

V. RESULTS AND DISCUSSION, PART-TIME AND FULL-TIME FARMING FAMILIES

Results of this research are presented in Chapters V and VI. Chapter V determines characteristics of farm families. These characteristics are shown as comparisions between part-time and full-time farming families. Chapter VI presents a classification of part-time farming families based on entry direction. This is followed by comparisons between urban non-farming and rural full-time farming entrants with respect to: social, economic and farm production characteristics; off-farm employment characteristics; reasons to farm and reasons to work off the farm; and, adjustments made to the farm operation and to the off-farm work.

As indicated in the definition of part-time farming in Chapter I, the off-farm work of the spouse was included when determining a part-time farming situation. Of the part-time farming families surveyed, 42 (40%) of the farm operators had off-farm work. Spouses working off the farm numbered 36 (34%) of the part-time farming families in the sample. Twenty-six (25%) reported that both the operator and the spouse had off-farm work. The high percentage of women working off the farm supports the inclusion of farm wives in the determination of the part-time farming status of a family.

Of the 271 respondents, 257 (95%) presently were

operating a farm, 14 (5%) were not.[7] Of the 257 farm families presently operating a farm, 104 (40%) reported off-farm work while 153 (59%) did not work off the farm. The percentage of part-time farming families is lower than expected. This may be explained by the possibility of non-response bias [8] within the part-time farming segment of the population. As well, the sampling source (discussed in Chapter IV) was biased toward full-time farming families.

Is the survey sample representative of the total population? To answer this question a comparison is made between results from the survey sample and avaliable data from the 1981 Census of Agriculture, Census Division 11. This comparison also facilitates the determination and direction of possible non-response bias.

As indicated, 40% of the survey sample had off-farm work while census data indicated that 49% of the population had off-farm work. It is clear that results are biased toward full-time farming families as noted previously. With regard to characteristics such as age of operator, farm sales, and farm size the comparisons between survey results and census data are shown in Table V.1. The survey sample is under-represented in the youngest age group and

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[7] Of the 14 not operating a farm, 9 were retired and 5 had moved into other occupations. Ten of these people still owned land of which 8 reported that the land was being farmed by someone else.

[8] The researcher, in assuring anonymity, did not identify any of the questionnaires or return envelopes. This was an ethical decision made with full knowledge that non-response bias could not be determined.

TABLE V.1

A COMPARISON OF PERCENTAGES BETWEEN SURVEY RESULTS
AND CENSUS DIVISION 11 (1981 CENSUS)

SUBJECT		SURVEY RESULTS	1981 CENSUS(1)
		(N=182)	(N=7014)
Age of Operator	(20 - 29 years)	2.2	6.9
	(30 - 39 years)	24.1	20.9
	(40 - 49 years)	30.8	28.5
	(50 - 59 years)	31.9	26.0
	(60 - 69 years)	14.3	13.4
	(70 and over)	6.5	3.9
TOTAL		100.0	100.0
		(N=224)	(N=7018)
Farm Sales	(Under $2500)	7.5	18.2
	($2500 - $4999)	5.8	11.4
	($5000 - $9999)	6.2	13.6
	($10000 - $24999)	21.4	21.4
	($25000 - $49999)	17.8	15.6
	($50000 - $99999)	21.8	11.6
	($100000 and Over)	19.1	7.9
TOTAL		100.0	100.00
		(N=246)	(N=7018)
Farm Size	(1 - 69 acres)	3.3	10.3
	(70 - 239 acres)	29.8	34.1
	(240 - 399 acres)	29.8	20.3
	(400 - 559 acres)	18.8	11.9
	(560 - 759 acres)	9.4	8.2
	(Over 759 acres)	9.4	11.7
TOTAL		100.00	100.00

1. Source: Statistics Canada. 1981 Census of Agriculture, Preliminary Results.

over-represented in the oldest age group. The lowest sales classes are under-represented in the sample while the highest sales classes are over-represented. With regard to farm size, the survey results indicate an under-representation in the smallest and largest size classes and an over-representation in the mid size classes.

Reasons for this under and over-representation in the survey sample may stem from non-response bias, and sampling procedures, but the fact that the survey sample was drawn from 1976 census lists may mean that the differences are a reflection of changes which have taken place in the population since 1976 with regard to age, farm size and farm sales.

A. Extent of Part-time Farming

Within the survey's part-time farming segment the respondents may be classified into categories representing the extent of their off-farm work (Bollman, 1979). Of the respondents from part-time farming families, 43 (41%) were involved in occasional (1 - 126 days) off-farm work, 25 (24%) reported part-time (127 - 228 days) and 36 (34%) reported full-time (over 229 days) off-farm work in 1981. The criteria used to determine inclusion in these categories was; number of hours worked off the farm in a day, number of days worked in a week, number of weeks worked in a month and number of months worked in 1981. The number of full-time equivalent days (6 hours) (Kada, 1980:129), worked in the

previous year was determined. (For example, if a respondent worked off the farm for 3 hours per day, 5 days per week, 2 weeks per month, 8 months of the year, the equivalent number of full-time days is fourty). This respondent would be classified as working "occasionally" off the farm.

B. Social Characteristics

Location in the Rural-urban Fringe

The influence of urbanization on part-time farming may be determined by examining the location of the part-time farm families vis-a-vis the full-time farm families. From the discussions in the preceding chapters, it is expected that part-time farming families are located closer to the city than full-time farming families. The survey sample was classified according to three distance zones from Edmonton to determine location in the rural-urban fringe.

Table V.2 shows the difference in farm families with off-farm work and those without regarding location in the rural-urban fringe. The difference, however, is contrary to that which was expected with more full-time farming families located closer to Edmonton than part-time farming families.

Although these results may in part be attributed to non-response bias and sampling problems, they are in accord with results found in Wisconsin by Kada (1980) who also found more full-time than part-time farming families located near urban centers. Kada explained these unexpected results

TABLE V.2

LOCATION OF FARM FAMILIES IN THE RURAL-URBAN FRINGE

TYPE OF FARM FAMILY	ZONE			TOTAL
	Near 0-36 miles	Mid 36.1-54 miles	Far over 54 miles	
Part-Time				
Number	58	20	26	104
Percent	(55.7)	(19.2)	(25.0)	(100.0)
Full-Time				
Number	109	24	20	153
Percent	(71.2)	(15.7)	(13.0)	(100.0)
Total				
Number	167	44	46	257
Percent	(64.9)	(17.1)	(17.8)	(100.0)

Chi-square = 10.9 Significant at 0.0522 with 5 df

by noting that the high cost of farm land near cities precludes any type of agriculture other than *large-scale capital intensive farming* (Kada, 1980:61). As well, he explained that:

> *a polarization is developing between large-scale full-time farmers who seek expansion of their farm operation through rented farmland and rural nonfarmers who rent out farmlands* (Kada, 1980:61).

The third reason centered on the off-farm job opportunities further away from the city and how these opportunities influenced the higher ratio of part-time to full-time farmers in the more remote areas.

These reasons may, in part, have some explanatory power when discussing the results found in the study area around Edmonton. Capital intensive farming is evident on the Class 1 and 2 soils immediately north and south of the city. As well, a polarization can be seen between full-time farmers and nonfarming landowners who hold land for development purposes but rent to farmers. Job opportunities in areas far away from Edmonton are abundant at the time of the study especially in the oil and gas fields located in the Counties of Parkland and Leduc.

Another reason for the unexpected results in this study may be the extent of subdivision restrictions placed on farmland by some of the various municipal governments involved, reducing the amounts of smaller farms which would potentially be operated on a part-time basis. Further investigation into other characteristics of farm families such as size of holding may shed some light on reasons for

the results found in this section of the research.

Age and Education of Farm Operators

Although the farm operator is generally considered to be the husband, there is a growing acceptance and recognition by researchers of the important role of the wife in the farm operation (Heffernan, 1982:2). To determine if farm families in the study area also recognize this contribution, a question concerning who is considered the farm operator was included in this research.

Within the part-time farming families it was expected that because of the involvement in off-farm work there would be more sharing of farm labor between husband and wife leading to an attitude that both were considered to be the farm operator. This was not the case. When part-time and full-time farming families were compared it was found that more full-time farming families considered both the husband and wife to be the farm operator, 40% compared to 30%.

The factor of off-farm work in the family does not seem to alter the family's perception of who the farm operator is, as there is little difference between the total sample and those with off-farm work. Although one-third of the sample (36%) considered both the husband and the wife to be the farm operators, the majority perceived the husband only to be the operator. This would indicate that the wife's contribution to the farm operation has not been recognized to the extent of inclusion in "operator" designation in the

area studied.

Age and education levels of farm operators indicate which farm families are more likely to be involved in part-time farming. The average age of all farm operators in the sample was 50 years, the operators in part-time farming families averaged 45 years and in full-time farming families, 53 years (See Table V.3). Part-time farming is most prevalent when the age of the operator is between 40 and 49, the family cycle stage where the youngest child has reached the teenage years. This indicates that part-time farming is not necessarily used as an entry into or exit out of agriculture as the major age groups of part-time farmers were not in the youngest and oldest classes. From the interviews and the response to the question concerning reasons to work off the farm it seems that part-time employment is a means used by previously full-time farm operators to smooth income fluctuations at times when family expenditures were high or to allow for the labor input of older children in the farm operation. From an urban, non-farming entrance position, it could be implied that the reason the majority of part-time farm operators fell in the 40-49 age group was that enough security had been built up in off-farm employment to allow for the investment in a farm operation.

Table V.4 shows the education levels attained by farm operators. The average grade completed by the sample respondents was 11. Part-time farming operators completed an

TABLE V.3

AGE OF FARM OPERATOR BY FARM FAMILY TYPE

TYPE OF FARM FAMILY	A G E C L A S S						TOTAL
	20-29	30-39	40-49	50-59	60-69	Over 70	
Part-Time							
Number	3	18	30	20	8	0	79
Percent	(3.8)	(22.8)	(38.0)	(25.3)	(10.1)	(0.0)	(100.0)
Full-Time							
Number	1	8	26	38	18	12	103
Percent	(.9)	(7.8)	(25.2)	(36.9)	(17.5)	(11.7)	(100.0)
Total							
Number	4	26	56	58	26	12	182
Percent	(2.2)	(14.3)	(30.8)	(31.9)	(14.3)	(6.5)	(100.0)

Chi-square = 23.81 Significant at 0.0006 with 6 df

TABLE V.4

EDUCATION LEVELS ATTAINED BY FARM OPERATORS

TYPE OF FARM FAMILY	EDUCATION LEVEL				TOTAL
	Grades 1-9	High School	Tech. Or Vocat.	Univ. Or Coll.	
Part-Time					
Number	27	36	24	14	101
Percent	(26.7)	(35.6)	(23.8)	(13.9)	(100.0)
Full-Time					
Number	64	48	15	10	137
Percent	(46.7)	(35.0)	(10.9)	(7.3)	(100.0)
Total					
Number	91	84	39	24	238
Percent	(38.2)	(35.3)	(16.4)	(10.1)	(100.0)

Chi-square = 14.385 Significant at 0.0024 with 3 df

average education level of one year of post-secondary education and full-time farming operators, averaged 10 and 1/2 years of school.

The results indicate that part-time farming operators attained higher levels of education than operators in full-time farming families. This tendency would be expected as operators with higher education levels would compete more successfully in the non-farm job market.

Age and Education of Spouses

The average age of all spouses in the sample was 46. Spouses in part-time farming families averaged 43 years and those of full-time farming families averaged 49 years. Table V.5 shows this comparison. These results are expected, as farm operators from part-time farming families are younger than operators from full-time farming families.

With regard to education of spouses, levels attained can be compared to education levels attained by farm operators (see Tables V.4 and V.5). Forty-nine percent of spouses versus 35% of farm operators completed high school. While more operators completed some vocational or technical training, 18% of the spouses had college or university educations compared to 10% of the farm operators. Of the part-time farming families, the average education level of spouses was one and one-half years of college or university and of the full-time farming families, it was grade 12. The total sample averaged an education level of grade 12, and

TABLE V.5
AGE OF SPOUSE BY FARM FAMILY TYPE

TYPE OF FARM FAMILY	AGE CLASS						TOTAL
	20-29	30-39	40-49	50-59	60-69	Over 70	
Part-Time							
Number	4	28	20	20	2	1	75
Percent	(5.3)	(37.3)	(26.7)	(26.7)	(2.7)	(1.3)	(100.0)
Full-Time							
Number	1	22	24	25	15	3	90
Percent	(1.1)	(24.4)	(26.7)	(27.8)	(16.7)	(3.3)	(100.0)
Total							
Number	5	50	44	45	17	4	165
Percent	(3.0)	(30.3)	(26.7)	(27.3)	(10.3)	(2.4)	(100.0)

Chi-square = 16.15 Significant at 0.0130 with 6 df

one-half year of post-secondary education. Table V.6 shows that there is little difference between spouses from part-time farming families and spouses from full-time farming families with respect to the educational categories of high school and technical or vocational training. There is a significant difference between spouses in the grade 1 - 9 category and the university or college category with three times as many full-time farming spouses in the former category and one and one-half times as many part-time farming spouses in the latter. This may be explained by the age differences between spouses of the two types of farming families. Nearly one-half of the spouses of full-time farming families are 50 years or older while only one-third of those from part-time farming families are 50 years or older, indicating that the educational opportunities for rural women have been steadily improving over the last 30 years.

Rural-urban Background of Farm Families

The majority of the farm operators (85%) and spouses (65%) in the total sample were raised on a farm. There were more part-time farming families with operators and spouses raised in the city than full-time farming families. These results (see Table V.7) indicate there is a slightly higher tendency to be in a part-time farming situation if the farm operator and/or spouse were raised in the city than if they were raised on a farm.

TABLE V.6

EDUCATION LEVELS ATTAINED BY SPOUSES

TYPE OF FARM FAMILY	EDUCATION LEVEL				TOTAL
	Grades 1-9	High School	Tech. Or Vocat.	Univ. Or Coll.	
Part-Time					
Number	11	55	12	23	101
Percent	(10.8)	(54.4)	(11.8)	(22.7)	(100.0)
Full-Time					
Number	38	57	12	18	125
Percent	(30.4)	(45.6)	(9.6)	(14.4)	(100.0)
Total					
Number	49	112	24	41	226
Percent	(21.6)	(49.5)	(10.6)	(18.1)	(100.0)

Chi-square = 14.33 Significant at 0.0063 with 3 df

TABLE V.7

RURAL-URBAN BACKGROUND OF PART-TIME AND FULL-TIME FAMILIES:
(WHERE FARM OPERATOR AND SPOUSE WERE RAISED)

FARM FAMILIES	WHERE RAISED						TOTAL	
	City		Small Town		Farm			
	Op*	Sp**	Op*	Sp**	Op*	Sp**	Op*	Sp**
Part-Time								
Number	17	21	4	18	83	65	104	104
Percent	(16.3)	(20.1)	(3.8)	(17.3)	(79.8)	(62.5)	(100.0)	(100.0)
Full-Time								
Number	9	18	6	23	127	90	142	131
Percent	(6.3)	(13.7)	(4.2)	(17.6)	(89.4)	(68.7)	(100.0)	(100.0)
Total								
Number	26	39	10	41	210	155	246	235
Percent	(10.5)	(16.5)	(4.0)	(17.4)	(85.3)	(65.9)	(100.00)	(100.0)

Chi-square = 7.07 Significant at 0.0291 with 2 df for Farm Operator
No significant difference for spouses
* Operator
** Spouse

Another aspect to consider when determining background is previous residence. The previous residence of the farm operator was used to add another dimension to the rural-urban background of farming families and, when examined in Chapter VI, will help to determine entry direction into a part-time farming situation. Results show that there was a significant difference with respect to previous residence with more part-time operators previously residing in a city and more operators from full-time farming families residing previously on a farm (see Table V.8).

With respect to previous occupation of the farm operator (farming or non-farming) there was a significant difference between each group. Fourty-eight percent of the operators from part-time farming families had only farmed before farming the present operation, indicating a full-time farming entry position. (See Table V.9.) Fifty (52%) had been involved in other occupations indicating a non-farming entry position. Of the full-time farming families, 108 or 74% of the operators had only farmed before farming the present operation but 38 (25%) had previously been involved in non-farm occupations. This may indicate a certain amount of movement from part-time to full-time farming. These results also show that more operators from part-time farming families have had previous off-farm work experience than those from full-time farming families.

The previous occupations reported by farm operators were classified into categories according to those used by

TABLE V.8

RURAL-URBAN BACKGROUND OF PART-TIME AND FULL-TIME FARM FAMILIES:
PREVIOUS RESIDENCE OF FARM OPERATOR

TYPE OF FARM FAMILY	PREVIOUS RESIDENCE			TOTAL
	City	Small Town	Farm	
Part-Time				
Number	32	9	63	104
Percent	(30.8)	(8.6)	(60.5)	(100.0)
Full-Time				
Number	16	5	130	151
Percent	(10.6)	(3.3)	(86.0)	(100.0)
Total				
Number	48	14	193	255
Percent	(18.8)	(5.4)	(75.6)	(100.0)

Chi-square = 21.8 Significant at 0.0001 with 3 df

TABLE V.9
PREVIOUS OCCUPATIONS OF OPERATORS

TYPE OF FARM FAMILY	OCCUPATION CATEGORIES							TOTAL
	Cler. and Sales	Serv. and Rel.	Res. Rel.	Prod., Proc.	Const., Trans.	Man., Admin.	Farming Only	
Part-Time								
Number	10	6	9	4	14	7	47	97
Percent	(10.2)	(6.1)	(9.1)	(4.0)	(14.2)	(7.1)	(47.9)	(100.0)
Full-Time								
Number	5	8	3	11	2	9	108	146
Percent	(3.4)	(5.4)	(2.0)	(7.5)	(1.3)	(6.1)	(73.9)	(100.0)
Total								
Number	15	14	12	15	16	16	155	243
Percent	(0.4)	(5.7)	(4.9)	(6.1)	(6.5)	(6.5)	(63.8)	(100.0)

Chi-square = 23.2 Significant at 0.0057 with 9 df

Statistics Canada (Statistics Canada, 1980:55) and are presented in Table V.9. More part-time operators were involved in sales, resource related, transportation, and construction occupations while operators from full-time farming families had previously been involved mainly in production, processing, managerial, administrative, and service occupations.

C. Economic Characteristics

Economic characteristics of farm families indicate the relative productivity of part-time farm families when compared to full-time farm families. Farm sales demonstrate significant differences with more part-time farming families being represented in the lowest sales class than full-time farming families and the converse in the higher sales classes (see Table V.10). Altogether, 46% of the full-time farming families had gross farm sales of less than $50,000 while 75% of the part-time farming families had sales of less than $50,000. As well, 56% of part-time farm families had agricultural sales of less than $25,000. These results indicate that farm production of the majority of part-time farming families is lower than that of full-time farm families. A major discrepancy exists, however, in the relatively large percentage (14%) of part-time farming families with sales of over $100,000. This discrepancy may be explained through analysis of the second economic characteristic, percent of total family income from

TABLE V.10

FARM SALES

TYPE OF FARM FAMILY	SALES CLASS					TOTAL
	Up To $9999	$10000 To $24999	$25000 To $49999	$50000 To $99999	Over $100000	
Part-Time						
Number	28	27	18	10	14	97
Percent	(28.8)	(27.8)	(18.6)	(10.3)	(14.4)	(100.0)
Full-Time						
Number	16	21	22	39	29	127
Percent	(12.6)	(16.5)	(17.3)	(30.7)	(22.8)	(100.0)
Total						
Number	44	48	40	49	43	224
Percent	(19.7)	(21.5)	(17.9)	(21.9)	(19.2)	(100.0)

Chi-square = 31.48 Significant at 0.0008 with 11 df

agricultural sales which indicates the extent of dependency on farming for family income. As would be expected, part-time farm families are generally less dependent on farm sales than full-time farm families (see Table V.11). However, a large proportion (31%) of part-time farm families fall in the range of 80 to 100% dependency on agriculture for their total family income indicating that a significant segment of these families rely mainly on farm production. These results may be explained as 41% of the part-time segment of the survey sample worked only occasionally off the farm and could easily manage a large scale operation around the time demands of occasional off-farm work.

The rather high percentage (21%) of full-time farming families who depend on agriculture for 60% or less of their total family income is of some concern. These people may, however, have investment, retirement, or transfer income, a conclusion which is reinforced by the fact that 29% of the full-time farm operators in the sample were 60 years or older.

The distribution of farm sales and the dependency on agriculture seem to become polarized for part-time farming families. One-half of the families have low farm sales and a minimal dependency on agricutural income. The other side of this distribution pattern shows a significant percentage of part-time farming families with high farm sales and a maximum dependency on agriculture. Further explanation of this polarization can be seen in Chapter VI when the two

TABLE V.11

PERCENT OF TOTAL FAMILY INCOME FROM AGRICULTURAL SALES

TYPE OF FARM FAMILY	PERCENTAGE CLASS					TOTAL
	1-20%	21-40%	41-60%	61-80%	81-100%	
Part-Time						
Number	24	19	11	4	26	84
Percent	(28.6)	(22.6)	(13.1)	(4.8)	(31.0)	(100.0)
Full-Time						
Number	10	9	8	5	94	126
Percent	(7.9)	(7.1)	(6.3)	(4.0)	(74.6)	(100.0)
Total						
Number	34	28	19	9	120	210
Percent	(16.2)	(13.3)	(9.0)	(4.2)	(57.1)	(100.0)

Chi-square = 41.72 Significant at 0.0000 with 4 df

entry directions, urban, non-farming and rural, full-time farming are compared with respect to these economic characteristics.

D. Farm Production Characteristics

Farm production characteristics may further explain the economic differences in the sample between part-time and full-time farming families. Survey results indicated that the respondents farmed their present operation for an average of twenty-three years. Part-time farming families averaged eighteen years and twenty-seven years was the average for the full-time farming families. As a partial explanation for the low farm sales of part-time farming families found in the preceeding section it is noted that 31% of these families farmed their present operation for 10 years or less, a viable operation generally takes 7 to 10 years to establish. The existance of part-time farming families in the 11 - 20 year category, however, suggests that there are reasons for maintaining off-farm employment other than to become established in farming. Sixty-three percent of the part-time farming families have been involved in the present farm operation for 20 years or less. This compares to 35% of the full-time farming families. Seventeen percent of the part-time farming families had been operating the present farm for 30 years or more compared to 33% of the full-time farming families. Part-time farming families seem to be not as well established in farming as their full-time

counterparts.

Farm Size

The small number (8) of farm families in the 1 - 69 acre size class was not as expected as the literature indicated that part-time farmers, in general, resided on smaller farms. Although more part-time farming families than full-time farming families owned land in this size class, their numbers are not significant. These results quite effectively dispell the idea that part-time farming is synonymous with small farms in the area studied. As already mentioned, the lack of respondents in the smallest size class may be due to non-response bias and municipal restrictions on land sub-division.

With regard to the survey sample, the smallest size class (1 - 69 acres) is mainly comprised of part-time farming families. The next size classes (70 - 239 acres and 240 - 399 acres) contain a majority of both the part-time and full-time farming families. Farms over 400 acres are operated by full-time farming families mainly (44% compared to 29% of the part-time farming families). Table V.12 shows the distribution of farm size in the sample surveyed.

The average farm size was 379 acres. For the part-time farming families, the average was 333 acres; for the full-time farm families, the average was 411 acres.

Fourty-six percent of the farm families rented land. The minimum acreage rented was 17 acres and the maximum

TABLE V.12

FARM SIZE, ACRES OWNED

TYPE OF FARM FAMILY	A C R E S						TOTAL
	1-69	70-239	240-399	400-559	560-759	Over 760	
Part-Time							
Number	7	27	27	16	6	8	91
Percent	(7.6)	(29.6)	(29.6)	(17.5)	(6.5)	(8.7)	(100.0)
Full-Time							
Number	1	46	46	30	17	15	155
Percent	(0.6)	(29.6)	(29.6)	(19.3)	(10.9)	(9.6)	(100.0)
Total							
Number	8	73	73	46	23	23	246
Percent	(3.3)	(29.8)	(29.8)	(18.8)	(9.4)	(9.4)	(100.0)

Chi-square = 22.844 Significant at 0.0006 with 8 df

acreage rented, 2000 acres. There was little difference in acres rented between the two types of farm families with the exception of the acreage range of 321 - 480 acres. Here, more part-time farming families rented land than full-time farming families (15% compared to 6% respectively). The average number of acres rented by the respondents was 383. For part-time farming families, the average acreage rented was 379 and for full-time farming families, the average was 385 acres.

The minimum acreage rented out to others was 4 acres and the maximum, 480 acres with 11% of the sample renting farmland to other individuals. With respect to acreage classes, 12% of the part-time farming families compared to 27% of the full-time farming families rented out 1 - 80 acres. In the 81 - 160 acre class there were twice as many part-time farming families renting land to others than full-time farming families (75% compared to 36%). The average number of acres rented out by the sample was 173 acres, with part-time farming families averaging 155 acres and full-time farming families, 187 acres.

It would seem that with regard to size of holding, rented and owned, there is little difference between part-time and full-time farming families.

Type of Operation

With the exception of dairy farming there was little difference found between full and part-time farming families

with respect to type of operation. The majority of farm types were cash grains and beef with 44% of the part-time farm families involved in grain and 37% involved in beef. Of the full-time farm families, 39% and 34% were involved in grain and beef respectively. Eight percent of the part-time farm families were involved in a hog operation compared to 12% of the full-time farm families. Dairy farmers comprised 4% of the part-time farm families compared to 12% of the full-time farm families.

Within each enterprise type, a comparison between part-time farming families and full-time farming families with respect to farm sales will indicate the extent of each enterprise type in the area studied.

Of the survey sample with cash grain sales, the minimum was $800, the maximum, $400,000, with average sales of $42,524. Part-time farming families averaged sales of $26,765 while full-time farming families averaged $55,931.

Sales of beef cattle in 1981 averaged $26,719 for those in the sample with off-farm work. Of those who reported no off-farm work, average beef sales were $31,138. Average sales for the sample in total were $29,174 with a minimum of $300 and a maximum of $36,000.

Part-time farmers had average sales from swine operations of $11,108 while full-time farmers averaged $35,740. Average hog sales for the entire sample were $27,273 with a minimum of $90 and a maximum of $160,000.

Dairy sales for part-time farm families averaged $120,017 and for the full-time dairy operators, average sales were $75,461. Dairy sales for the sample averaged $85,362 with a mimimum of $320 and a maximum of $250,000.

Although dairying is the most intensive type of operation of the four reported here, part-time farming families averaged much higher sales than did full-time dairy farmers. These results are not as expected as the time required for dairy farming would normally exclude off-farm work. These unexpected results may be explained by an examination of who in the family is working off the farm. It appears that of the dairy farm enterprises in the higher sales classes run by part-time farming families, it is the spouse of the farm operator who works off the farm while the operator does not.

The minor differences between full- and part-time farm families, with respect to farm production characteristics, point out that part-time farming families control similar agricultural resources as full-time farming families. They are, however, producing and selling less, on the average, than full-time farming families. This discrepancy is an area of concern for policy makers.

Credit Sources and Use of Credit

Generally, credit is used in the farm operation for machinery and land purchases (investment capital) and for input purchases (operating capital). Credit sources and use

of credit by full-time farmers may be different than that of part-time farmers. As well, some credit sources available to full-time farmers may have eligibility restrictions which limit their use by part-time farm families. Also, dependence on credit may not be extensive as the part-time operator may use the capital generated from off-farm employment for investment and operating costs.

Credit sources and use were determined for both sample groups and the results compared as follows. The most important sources of credit as reported by respondents is shown in Table V.13.

The survey sample were asked to indicate attitudes toward each credit source by responding to four categories. Multiple responses were allowed. A respondent could indicate that the bank had been used in the past five years and that there were plans to use this source in the next five years. The total number of responses for each credit source is indicated in Table V.14 with the proportion of responses in each category reported in the body of the table.

Banks were used most often in the past five years as a source of credit, followed by farm supply and machinery dealerships, the Farm Credit Corporation and the Credit Union. Compared to the percentage of respondents reporting credit sources used in the past five years, there seemed to be a reluctance to use credit in the next five years. High interest rates, no doubt, have an influence on the amount of credit farmers are planning to use. However, the bank was

TABLE V.13

MOST IMPORTANT CREDIT SOURCE AS REPORTED BY RESPONDENTS

SOURCE	% REPORTING
Bank	78.3
Credit Union	7.8
Farm Supply And Implement Dealers	6.5
Relatives	3.6
Treasury Branch	1.8
Small Business Development Corporation	1.4
TOTAL	100.0

TABLE V.14

USE OF CREDIT BY FARM FAMILIES: PERCENT OF SAMPLE REPORTING IN EACH CATEGORY

CR. SOURCE	C A T E G O R I E S							
	Would Not Use		Have Used In Past 5 Years		Would Like To Use But Not Elligible		Plan To Use In Next 5 Years	
	P/T	F/T	P/T	F/T	P/T	F/T	P/T	F/T
Bank	19.6	13.3	67.6	69.2	1.0	0.0	11.8	17.3
Cr.Union	71.6	69.5	22.2	24.4	4.9	0.0	1.2	6.0
Alta. Dev.Corp.	59.3	58.5	7.4	17.1	29.6	22.0	3.7	2.4
Sm.Bus. Dev.Corp.	74.4	81.6	1.3	0.0	19.2	15.8	5.1	2.6
Alta. Opp.Co.	72.0	83.3	1.3	0.0	20.0	15.3	6.6	1.4
Farm Cr.Corp.	40.7	42.7	32.6	32.6	19.7	19.1	7.1	5.6
Fed.Bus. Dev. Bank	85.9	78.7	2.8	1.3	9.9	14.7	1.4	5.3
Farm Supp. Or Impl. Dealers	29.5	27.3	60.2	63.6	1.1	0.0	9.1	9.0
Vend.Fin.	82.9	86.1	15.9	11.4	0.0	0.0	1.2	2.6
Relatives	64.8	81.6	34.1	14.9	0.0	2.3	1.1	1.1
Other (Treas.Br.)	84.2	90.0	15.8	5.0	0.0	0.0	0.0	5.0

again cited as the source most likely to be used, followed by farm supply and implement dealers.

With the exception of the bank and farm supply or implement dealers, the majority of all response for the remaining sources of credit fall into the category of "would not use" indicating a negative attitude towards these credit sources among the farming community.

With respect to eligibility of farmers to utilize certain credit sources there was little difference between part-time and full-time farming families. Slight differences in eligibility exist with regard to the Small Business Development Corporation and the Alberta Opportunity Company with eligibility favoring full-time farming families. Another slight difference exists with the Federal Business Development Bank, the eligibility favoring part-time farm families.

To summarize, results indicate a negative attitude towards the use of credit but at the same time responses show that credit is used extensively despite this attitude. As well, there are few perceived limitations with respect to credit eligibility among part-time farming families.

E. Future Plans

Future plans are an indicator of commitment to farming and to the off-farm job and will give further evidence regarding the persistence of part-time farming in the study area. As well, the future plans of full-time farm families

indicate to what extent entrance into a part-time situation is comtemplated. Results of the survey show that full-time farm families plan to remain in the same position over the next five years but plan to reduce farming activity over the next ten years. Very few wish to increase off-farm work activity. This would be expected as the ages of full-time farmers are higher than part-time farmers and many are expecting to retire soon.

Of the part-time farming families, 39% plan to remain as that over the next five years, 17% plan to increase farming activity and 16% plan to decrease farming activity. Only 4% plan to decrease off-farm work while 5% plan to increase off-farm work over the next five years. Over the next ten years, 24% of the part-time farming families plan to remain in the same position, 14% plan to increase farming activity while 26% would like to decrease farming activity, only 4% plan to increase off-farm work. A significant percentage, 13% would like to decrease off-farm work over the next 10 years.

These results indicate a significant percentage of the part-time farming families plan to remain in the same position over the next five years. Over the next ten years the percentage planning to remain in the same position is halved and roughly the same number plan to decrease farming activity. The small percentage indicating plans to increase off-farm work compared to the larger percentage planning to increase farming activity indicates respondents may wish to

be farming full-time. This indication is further supported by the higher percentage of respondents indicating plans to decrease off-farm work.

A summary of the responses concerning future plans in presented in Table V.15. It would seem that farming families are reasonably sure they will be in the same position in the next five and ten years as they are in now. Generally, part-time farmers, wish to remain in a part-time situation for the next five years and wish to increase farming activity over the next ten years. This indicates that part-time farming families want to move towards full-time farming which would have an influence on their present farming decisions even if they may not be farming full-time in the future.

F. Problems

In all, 25 problems were tested to determine the importance of these problems to the respondents. Selected problems were reported by respondents using a Likert scale. The average of each scale was computed and reported as a comparison between full and part-time farming families. This comparison is presented in Table V.16.

The most important problems for both groups were prices for agricutural products, machinery costs, energy costs, interest rates, marketing systems, and lack of time for family activities. Significant differences did not exist between full and part-time farming families except for the

TABLE V.15

FUTURE PLANS OF FARM FAMILIES OVER THE NEXT 5 AND 10 YEAR PERIODS

PLANS	5 YEARS				10 YEARS			
	Part-Time		Full-Time		Part-Time		Full-Time	
	No.	%	No.	%	No.	%	No.	%
Rem. In Same Pos.	40	(39.2)	64	(55.2)	20	(23.8)	31	(32.3)
Incr. Farm. Act.	17	(16.7)	17	(14.7)	12	(14.3)	12	(12.5)
Decr. Farm. Act.	16	(15.7)	27	(23.3)	22	(26.2)	48	(50.0)
Incr. Off-Farm Work	4	(3.9)	4	(3.4)	3	(3.6)	2	(2.1)
Decr. Off Farm Work	5	(4.9)	1	(0.9)	11	(13.1)	1	(1.0)
Incr. Farm Act. & Incr. Off-Farm	2	(2.0)	0	(0.0)	6	(7.1)	0	(0.0)
Incr. Farm & Decr. Off-Farm	9	(8.8)	0	(0.0)	8	(9.5)	0	(0.0)
Decr. Farm. & Incr. Off-Farm	3	(2.9)	0	(0.0)	1	(1.2)	2	(2.1)
Decr. Both Farm. And Off-Farm	4	(3.9)	1	(0.9)	1	(1.2)	0	(0.0)

TABLE V.16
SELECTED PROBLEMS AS VIEWED BY PART-TIME AND FULL-TIME FAMILIES

PROBLEM	FARM FAMILIES				SIGNIFICANCE
	Part-Time		Full-Time		
	X	No.	X	No.	
Credit Avail.	3.47	99	3.17	122	.19
Int. Rates	4.68	99	4.22	130	*.002
Prices Ag. Prod.	4.87	104	4.94	136	.11
Mkg. Systems	4.34	102	4.28	128	.71
Urban Expansion	3.19	99	3.26	120	.72
Avail. Tech. Farm Adv.	3.16	98	3.10	119	.76
Avail. Farm Mgmt. Adv.	2.76	99	2.60	120	.36
High Land Prices	4.00	100	4.00	131	.97
Low Land Prices	2.93	96	3.17	111	.31
Land Avail. to Rent	2.66	98	2.85	117	.38
Energy Costs	4.78	102	4.85	136	.25
Machinery Costs	4.78	100	4.86	137	.26
Farm Labor Avail.	2.40	99	3.00	124	*.002
Approp. Mach.	3.22	101	3.54	124	.10
Leisure Time	3.47	88	3.36	115	.54
Entert. Facil.	2.65	99	2.72	112	.70
Adequate Schools	3.75	100	3.80	111	.80
Recr. Facilities	3.05	99	3.04	111	.97
Hlth. Care Facil.	3.95	99	4.10	119	.40
Comm. Act. Time	3.08	99	3.26	115	.26
Fam. Act. Time	4.27	98	4.21	119	.66

* Significant at 0.05 level

problems of interest rates and farm labor availability with part-time farming families rating these problem as slightly less important than full-time farming families.

The importance of problems related to off-farm work for part-time farming families were not scored as high as the agricultural problems, indicating that off-farm work is not as problematic in the study area as are difficulties with the farm operation. The mean scores for problems relating to off-farm work were 3.18 for off-farm working hours, 3.53 for wages and salaries, 2.65 for adequate child care and 3.01 for commuting costs.

G. Importance of Information Sources

Respondents were asked to rate the importance or merit of different information sources using a Likert scale. The scale was treated the same as for the problem question and average scores computed for part-time and full-time farming families.

The most important information source was "own experience" followed by "family" and "friends and neighbors". Table V.17 shows, in order of importance, the ranking of the various information sources, comparing part-time and full-time farming families. The one significant difference found between full and part-time farming families was for the relative merit of "own experience". Full-time farmers felt this was more important as an information source than part-time farming families.

TABLE V.17

IMPORTANCE OF SOURCES OF INFORMATION AS PERCEIVED BY PART AND FULL TIME FAMILIES

INFORMATION SOURCE	F A R M F A M I L I E S				SIGNIFICANCE
	Part-Time		Full-Time		
	X	No.	X	No.	
Dist. Ag.,Ag.Fldmn.	3.21	104	3.23	130	0.68
Univ. Personnel	1.95	98	2.17	119	*0.06
Gvt. Publications	2.58	100	2.66	121	0.54
Mktg. Org.	2.77	104	2.86	121	0.27
Bank/Lend.Ag.Pers.	3.01	101	2.90	119	0.79
Priv. Consultants	1.58	98	1.77	114	0.19
Elevator Agents	3.28	100	3.35	127	0.65
Farm Magazines	3.40	102	3.52	127	0.47
Newspapers	2.90	99	3.14	127	0.77
Radio	3.27	102	3.38	129	0.63
Television	2.55	98	2.74	229	0.22
Eq.&Supp.Dlrs.	3.24	101	3.46	124	0.82
Friends,Neighbors	3.84	103	3.88	128	0.69
Family	4.08	101	4.22	126	0.43
Own Experience	4.60	101	4.75	136	*0.04

* Significant

This can be related to the number of years farming the present operation. As full-time farming families have been farming longer, it would be expected that they would rely on their own experience to a greater extent than part-time farming families.

Another significant difference existed in the information source "university personnel" with full-time farmers seeing this source as more important than part-time farmers. Of interest to note is that there is no difference between part-time farming families and full-time farming families with respect to the importance of district agriculturists and agriculture fieldmen as an information source. Further investigation into the extent of contact with these extension services will reveal differences in the use of these services.

H. Extent of Contact With Extension Services

The extent of contact with extension services was reported by respondents in the form of a choice between four categories. Elevator agents were contacted most frequently, followed by bank or lending agency personnel. Farm equipment and supply salesmen were third on the list. District agriculturists, fieldmen, and district home economists were contacted by the highest percentage of respondents (75%, 54%, and 33% respectively).

TABLE V.18
EXTENT OF CONTACT WITH EXTENSION SERVICES BY FARM FAMILIES

SOURCE & EXTENT OF CONTACT	F A R M F A M I L I E S				TOTAL	
	Part-Time		Full-Time			
	No.	%	No.	%	No.	%
Elevator Agent						
Not in contact	24	(66.6)	12	(33.3)	36	(100.0)
1-6 times/year	40	(48.0)	65	(61.9)	105	(100.0)
monthly	27	(40.2)	40	(59.7)	65	(100.0)
weekly	9	(56.2)	7	(43.7)	16	(100.0)
TOTAL	100	(44.6)	124	(55.3)	224	(100.0)
Bank Or Lending Agency Staff						
Not in contact	32	(47.0)	36	(52.9)	68	(100.0)
1-6 times/year	50	(48.5)	53	(51.4)	103	(100.0)
monthly	11	(31.4)	24	(68.5)	35	(100.0)
weekly	1	(33.3)	2	(66.6)	3	(100.0)
TOTAL	94	(44.9)	115	(55.0)	209	(100.0)
Salesmen						
Not in contact	50	(54.3)	42	(45.6)	92	(100.0)
1-6 times/year	42	(42.8)	56	(57.1)	98	(100.0)
monthly	4	(33.3)	12	(66.6)	16	(100.0)
weekly	0	(0.0)	3	(0.0)	3	(100.0)
TOTAL	96	(45.9)	113	(54.0)	209	(100.0)
District Agriculturist						
Not in contact	28	(56.0)	22	(44.0)	50	(100.0)
1-6 times/year	70	(43.7)	96	(56.3)	160	(100.0)
monthly	3	(50.0)	3	(50.0)	6	(100.0)
weekly	0	(0.0)	0	(0.0)	0	(100.0)
TOTAL	101	(45.4)	121	(54.5)	216	(100.0)
Agricultural Fieldman						
Not in contact	52	(57.7)	38	(42.3)	90	(100.0)
1-6 times/year	45	(38.1)	73	(61.9)	118	(100.0)
monthly	1	(25.0)	3	(75.0)	4	(100.0)
weekly	0	(0.0)	0	(0.0)	0	(100.0)
TOTAL	98	(46.3)	114	(53.7)	212	(100.0)

(Continued...)

TABLE V.18 (Continued)
EXTENT OF CONTACT WITH EXTENSION SERVICES BY FARM FAMILIES

SOURCE & EXTENT OF CONTACT	F A R M F A M I L I E S				TOTAL	
	Part-Time		Full-Time			
	No.	%	No.	%	No.	%
District Home Economist						
Not in contact	57	(43.5)	74	(56.4)	131	(100.0)
1-6 times/year	38	(52.7)	34	(47.2)	72	(100.0)
monthly	2	(50.0)	2	(50.0)	4	(100.0)
weekly	0	(0.0)	7	(0.0)	0	(100.0)
TOTAL	97	(46.8)	110	(53.1)	207	(100.0)
University Personnel						
Not in contact	82	(48.8)	86	(51.1)	168	(100.0)
1-6 times/year	15	(40.5)	22	(59.5)	37	(100.0)
monthly	0	(0.0)	1	(100.0)	1	(100.0)
weekly	0	(0.0)	0	(0.0)	0	(100.0)
TOTAL	97	(47.0)	109	(53.0)	206	(100.0)
Experimental Station Staff						
Not in contact	81	(48.2)	87	(51.8)	168	(100.0)
1-6 times/year	14	(43.7)	18	(56.3)	32	(100.0)
monthly	2	(100.0)	0	(0.0)	2	(100.0)
weekly	0	(0.0)	1	(100.0)	1	(100.0)
TOTAL	97	(47.7)	106	(52.3)	203	(100.0)
Regional Specialist						
Not in contact	87	(48.3)	93	(51.7)	180	(100.0)
1-6 times/year	10	(40.0)	15	(60.0)	25	(100.0)
monthly	0	(0.0)	0	(0.0)	0	(100.0)
weekly	0	(0.0)	0	(0.0)	0	(100.0)
TOTAL	97	(47.5)	108	(52.2)	205	(100.0)

Table V.18 shows the numbers of part-time and full-time farming families who reported contact with each information source in each contact category. The percentage reported in each category is also indicated. A comparison between part and full-time farm families with respect to extent of contact is presented. The only significant difference between part-time and full-time farming families with respect to extent of contact was with the elevator agent. Twice as many part-time farming families than full-time farming families reported that they were not in contact with the agent. The other sources had response numbers which were too small to test for significant differences.

Part-time farming families were in contact with district agriculturists and agriculture fieldmen less often than full-time farming families. More part-time farming families reported they were not in contact although the importance of this information source was the same for both groups.

VI. RESULTS AND DISCUSSION: A COMPARISON BETWEEN URBAN AND RURAL ENTRANTS

A. A Classification of Part-time Farming Families

Using entry direction, the farm families reporting off-farm work were classified into two groups. Previous residence patterns and occupations were combined to determine entry direction which is the basis of the group distinction.[9] The first group, from an urban or non-farming entry direction comprised 57% (59 families) of the total. The second group, from a rural, full-time farming entry direction comprised 43% (45 families).

This classification system is similar to the typology used by Kada in Wisconsin (see Chapter II). Because of this, the results of this research may be compared to Kada's. The comparison, although not rigorously tested, may be used to show more clearly the development of part-time farming in Edmonton's rural-urban fringe. This comparison is as follows.

Classification on the basis of entry direction using the two variables of previous residence and previous occupation resulted in four types of part-time farming families for the Wisconsin study and for this study. The number and percentages of each type are outlined in Table

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[9]Previous residence patterns were determined using two criteria, where the operator was raised and previous residence of the operator. The farm operator's previous occupation was collapsed into two categories which resulted in a farming/non-farming dichotomy.

VI.1.

Although these results are not strictly comparable geographically, major differences are noted with the "persistent" type and the "entrant" type. The smaller percentage of the "persistent" type in this study indicates that part-time farming has not been as common over the generation of farmers studied in the Edmonton area as in Wisconsin. The differences in percentages of the "entrant" type may be explained by the fact that this study was conducted in the rural-urban fringe where it is expected that there would be a higher porportion of part-time farmers resulting from urban-rural migration than in a statewide study as in Wisconsin.

For this chapter, the comparative analysis is based on differences between urban, non-farming entrants and rural, full-time farming entrants, the groups "U-turn" and "Entrant" being combined to form the "Urban Engrant" group and the remainder forming the "Rural Entrant" group.

B. Extent of Part-time Farming

Extent of part-time farming was determined as was outlined in Chapter V. More detail is required in this section, therefore it becomes important to discuss the extent of off-farm work for both the farm operator and the spouse.

In the sample surveyed, it was found that operators from an urban entrance position are more prevalent in the

TABLE VI.1

A COMPARISON BETWEEN TYPES OF PART-TIME FARMING FAMILIES
IN WISCONSIN AND THE RURAL-URBAN FRINGE OF EDMONTON

TYPE	PREV. RESID. PATTERN	PREV. CAREER OF OPERATOR	F A R M F A M I L I E S			
			No.		%	
			W*	E**	W* (N=193)	E** (N=104)
Transi-tional	Rur-Rur	Farm. Only	77	45	(39.9)	(43.3)
Persis-tent	Rur-Rur	Farm. & Non-Farm.	59	12	(30.6)	(11.5)
U-Turn	Rur-Urb-Rur	Farm. &Non-Farm.	33	24	(17.1)	(23.1)
Entrant	Urb-Rur	Non-Farm. Only	24	23	(12.4)	(22.1)

* Wisconsin
** Edmonton

full-time off-farm work category than those from a rural entrance position. In total, 66% of the operators from an urban entrance position worked full-time off the farm, 25% worked part-time and 9% worked occasionally off the farm. Of the rural entrant operators, 32% worked full-time, 64% worked part-time and 5% worked occasionally off the farm (see Table VI.2).

This distribution was expected as previous off-farm work in the background of urban entrants would mean the operator had, over time, developed more permanent off-farm employment. These results will be further examined later in this chapter in the discussion of off-farm employment characteristics.

There were more spouses working full-time off the farm than part-time or occasionally. Of those from an urban entry position, 50% worked full-time, 47% worked part-time and 3% worked occasionally. Of those from a rural entrance position, 21% worked full-time, 77% worked part-time and 3% worked occasionally off the farm (see Table VI.2). Altogether the majority of the women worked part-time off the farm, the majority of the men worked full-time off the farm.

TABLE VI.2

EXTENT OF OFF-FARM WORK

PART-TIME FARM FAMILY	EXTENT OF OFF-FARM WORK						TOTAL	
	F/T		P/T		OCC.			
	Op.	Sp.	Op.	Sp.	Op.	Sp.	Op.	Sp.
Urban Entrant								
Number	29	15	11	14	4	1	44	30
Percent	(65.9)	(50.0)	(25.0)	(46.7)	(9.1)	(3.3)	(100.0)	(100.0)
Rural Entrant								
Number	7	6	14	23	1	1	22	30
Percent	(31.8)	(20.0)	(63.6)	(76.7)	(4.5)	(3.3)	(100.0)	(100.0)
Total								
Number	36	21	25	37	5	2	66	30
Percent	(54.5)	(35.0)	(37.9)	(61.7)	(7.6)	(3.3)	(100.0)	(100.0)

Operator: Chi-square = 9.30 significant at 0.0095 with 2 df

Spouse: Chi-square = 6.04 significant at 0.0486 with 2 df

C. Social Characteristics

Location in the Rural-urban Fringe

The differences between part-time and full-time farming families with respect to location in the rural-urban fringe were significant although opposite to expected differences with more full-time farming families living closer to the city than part-time farming families. A closer look at the part-time farming families will help to further explain these unexpected results. Table VI.3 shows that more urban, non-farming entrants live near the city than do rural, full-time farming entrants, 22% compared to 16% in the "near" (0-18 miles) zone. Other than that there were few differences in the proportion of entrant types living in each zone with one-forth of each living in the "very far" zone.

Age and Education of Farm Operators

The data in Chapter V showed that farm operators from part-time farming families are younger than those from full-time farming families. Part of this difference stemed from the differences between urban and rural entrants with the urban entrants being younger than the rural entrants. Twenty-eight percent of the urban entrants were under 40 compared to 19% of the rural entrants (see Table VI.4).

Although the majority of operators in both groups were in the 40 - 49 age category, 44% of the rural entrants were

TABLE VI.3

LOCATION OF PART-TIME FARMING FAMILIES
IN THE RURAL-URBAN FRINGE

PART-TIME FARM FAMILIES	L O C A T I O N				TOTAL
	Near 0 To 18 miles	Mid 18.1 To 36 miles	Far 36.1 To 54 miles	Very Far Over 54 miles	
Urban Entrant					
Number	13	22	9	15	59
Percent	(22.0)	(37.3)	(15.3)	(25.5)	(100.0)
Rural Entrant					
Number	7	15	12	11	45
Percent	(15.6)	(33.3)	(26.7)	(24.5)	(100.0)
Total					
Number	20	37	21	26	104
Percent	(19.2)	(35.6)	(20.2)	(25.0)	(100.0)

No statistically significant difference

TABLE VI.4

AGE OF FARM OPERATOR BY PART-TIME FARMING FAMILY TYPE

TYPE OF PART-TIME FARM FAMILY	A G E C L A S S						TOTAL
	20-29	30-39	40-49	50-59	60-69	Over 70	
Urban Entrant							
Number	2	13	18	10	3	0	46
Percent	(4.3)	(28.2)	(39.1)	(21.7)	(6.5)	(0.0)	(100.0)
Rural Entrant							
Number	1	5	12	10	5	0	33
Percent	(3.1)	(15.6)	(37.8)	(31.3)	(12.5)	(0.0)	(100.0)
Total							
Number	3	18	30	20	8	0	79
Percent	(3.8)	(23.1)	(38.5)	(25.6)	(9.0)	(0.0)	(100.0)

No Statistical significance. (Sample was too small.)

50 years or older compared to only 28% of the urban entrants. These differences have important implications for policy formulation as the evidence indicates that part-time farmers cannot be grouped together as a homogeneous segment of agricultural producers. The older rural entrants will be retiring from farming and the off-farm job within the next ten or twenty years while the younger urban entrants will be farming for much longer (see Table V.17 for future plans). Some of these people will eventually be farming full-time but it is likely that the majority will remain in a part-time situation, becoming a persistent segment of the agricultural structure in the area studied.

An examination of the educational levels attained by the entrant groups will determine which group most strongly influenced the differences in education levels between part and full-time farm operators. Results presented in Chapter V showed that part-time farm operators were more highly educated than full-time farm operators. As can be seen in Table VI.5, this difference can be attributed to the higher education levels attained by urban entrants as compared to rural entrants. Fourty-nine percent of the urban entrants had secondary education or training. Only 24% of the rural entrants went beyond a high school education. Although this difference can be partially attributed to age differences with the younger men having more opportunities for further education, there remains the fact that the urban entrants, because of their previous off-farm work experience, can

TABLE VI.5
EDUCATION LEVELS ATTAINED BY FARM OPERATORS

PART-TIME FARM FAMILY	EDUCATIONAL LEVEL				TOTAL
	Grades 1-9	High School	Tech. Or Vocat.	Univ. Or Coll.	
Urban Entrant					
Number	14	15	18	10	57
Percent	(24.6)	(26.3)	(31.6)	(17.5)	(100.0)
Rural Entrant					
Number	12	19	6	4	41
Percent	(29.3)	(46.3)	(14.6)	(9.8)	(100.0)
Total					
Number	26	34	24	14	98
Percent	(26.5)	(34.7)	(24.5)	(14.3)	(100.0)

Chi-square = 14.385 Significant at 0.0024 with 3 df

compete more sucessfully in the off-farm job market than the rural entrants. Also, it is important to note that because of the educational levels attained by the urban entrants it is more likely that they will remain in a part-time farming situation (continue in the off-farm job) further reinforcing the implication that the part-time segment will persist. Another implication arising from the examination of the differences in educational levels attained is the extension implication. Higher education is a characteristic of the "innovative" farmer, the one most likely to try new techniques and co-operate with extension agents in their extension efforts. The urban entrants can be considered as clientele of extension education in that there may be opportunities with this group that may not exist with the rural entrants or full-time farmers in general.

Age and Education of Spouses

As expected, spouses in part-time farming families from an urban entrance position were younger and more highly educated than those from a rural entrance position, reflecting the differences found with the farm operators. Table VI.6 shows the age categories of the spouses. Sixty-two out of seventy-five of these families (83%) had spouses working off the farm, 37% of which were between the ages of 30 and 39. Because these women are working away from home when their children are still quite young, it may be expected that adequate child care facilities would have been

TABLE VI.6

AGE OF SPOUSE

PART-TIME FARM FAMILY	A G E C L A S S						TOTAL
	20-29	30-39	40-49	50-59	60-69	Over 70	
Urban Entrant							
Number	3	19	11	10	0	0	43
Percent	(7.0)	(44.2)	(25.6)	(23.3)	(0.0)	(0.0)	(100.0)
Rural Entrant							
Number	1	9	9	8	2	3	32
Percent	(3.1)	(28.1)	(28.1)	(25.0)	(6.2)	(9.3)	(100.0)
Total							
Number	4	28	20	18	2	3	75
Percent	(5.3)	(37.3)	(26.6)	(24.0)	(2.6)	(4.0)	(100.0)

No statistical significance (sample was too small)

more of a problem than indicated by respondents. The fact that it was not may be explained when it is recalled that 62% of spouses work part-time off the farm while 35% work full-time off the farm. Either these women are working around the demands of a family with young children or there are adequate child care opportunities found in rural areas or near places of employment.

Education levels attained by spouses (see Table VI.7) again reflects farm operator characteristics with the urban entrants having more secondary education and training than the rural entrants (see Table VI.7). An interesting observation stems from the results which show that more farm women than men in the sample surveyed had university or college education (23% compared to 14%). It would be expected then that these women would be working off the farm in careers or professions rather than in semi-skilled or labor situations and that the motivations for working off the farm would be related to maintenance of careers or professions rather than purely economic in nature. Tables VI.12 and VI.14 show that this is not the case as the majority of the women are employed in clerical positions and the primary reason stated for working off the farm is economic in nature, although maintenance of a profession was ranked second for both entrant groups.

TABLE VI.7

EDUCATION LEVELS ATTAINED BY SPOUSES

PART-TIME FARM FAMILY	EDUCATIONAL LEVEL				TOTAL
	Grades 1-9	High School	Tech. Or Vocat.	Univ. Or Coll.	
Urban Entrant					
Number	2	29	10	16	57
Percent	(3.5)	(50.9)	(17.5)	(28.1)	(100.0)
Rural Entrant					
Number	9	24	2	7	42
Percent	(21.4)	(57.1)	(4.8)	(16.5)	(100.0)
Total					
Number	11	53	12	23	99
Percent	(11.1)	(53.5)	(12.1)	(23.2)	(100.0)

Chi-square = 13.85 Significant at 0.0078 with 4 df

D. Economic Characteristics

As discussed in Chapter I and again in Chapter V, there was some concern about the productivity of part-time farming families. This concern has been reflected in the results with more rural entrants in the higher sales classes and more urban entrants in the lower sales classes. Table VI.8 points out that over 69% of the urban entrants had agricultural sales of less than $25,000 in 1981 compared to only 45% of the rural entrants. The high percentage of urban entrants with sales under $10,000 (40%) shows that the differences in farm sales between part-time and full-time farming families is explained by the low sales of urban entrants. Also, it is clear that rural entrants make up the majority of those part-time farming families with sales of over $100,000. Considering the amount of land being farmed by part-time farming families, some concern can be expressed regarding the agricultural productivity of urban entrants.

Dependency on farming, which is related to extent of off-farm work, is expressed in this research as the percent of total family income from agricultural sales. As urban entrants had mainly full-time off-farm work, it would be expected they would be less dependent on farming as a source of income. Results show that, as expected, there was a difference between entrant groups with the urban entrants in the lower percentage classes and the rural entrants concentrated in the higher percentage classes (see Table VI.9).

TABLE VI.8

FARM SALES

PART-TIME FARM FAMILY	SALES CLASS					TOTAL
	Up To $9999	$10000 To $24999	$25000 To $49999	$50000 To $99999	Over $100000	
Urban Entrant						
Number	21	15	6	7	3	52
Percent	(40.4)	(28.8)	(11.5)	(13.4)	(5.8)	(100.0)
Rural Entrant						
Number	7	12	10	2	11	42
Percent	(16.6)	(28.5)	(23.8)	(4.8)	(26.2)	(100.0)
Total						
Number	28	27	16	9	14	94
Percent	(29.8)	(28.7)	(17.0)	(9.5)	(14.9)	(100.0)

Chi-square = 31.25 Significant at 0.0225 with 11 df

TABLE VI.9

PERCENT OF TOTAL FAMILY INCOME FROM AGRICULTURAL SALES

PART-TIME FARM FAMILY	PERCENTAGE CLASS					TOTAL
	1-20%	21-40%	41-60%	61-80%	81-100%	
Urban Entrant						
Number	15	13	8	1	1	38
Percent	(32.6)	(28.3)	(15.2)	(2.2)	(21.7)	(100.0)
Rural Entrant						
Number	9	6	3	3	15	36
Percent	(25.7)	(17.1)	(8.6)	(8.6)	(40.0)	(100.0)
Total						
Number	24	19	11	4	16	74
Percent	(28.6)	(22.6)	(13.1)	(4.8)	(31.0)	(100.0)

No significant difference

E. Farm Production Characteristics

The differences found between part-time and full-time farming families with respect to farm production characteristics can be further explained by an examination within the part-time segment. This will lead to a better understanding of agricultural changes near Edmonton. As previously seen, most urban entrants do not rely on agricultural production as a main source of income. It is important to determine other production differences between urban entrants and rural entrants.

Farm Size

Full-time farming families own the larger farms found in this area. With this exception, there was not much difference between part-time and full-time farming families regarding number of acres owned. However, comparing farm size characteristics of part-time farming families it can be seen that urban entrants own all of the farms in the 1-69 acre category, there was little difference in the 70-239 acre category and in the 240-399 acre category, twice as many urban entrants than rural entrants owned farms. Of the farms over 400 acres in size, 44% are owned by rural entrants while only 16% were owned by urban entrants (see Table VI.10).

Altogether, 42 farm families rented land from others, 22 of these were urban entrants. In both groups, the largest percentage rented quarter sections, 36% and 35% for the

TABLE VI.10

ACRES OWNED BY PART-TIME FARM FAMILIES

PART-TIME FARM FAMILY	ACREAGE CATEGORIES						TOTAL
	1-69	70-239	240-399	400-559	560-759	Over 760	
Urban Entrant							
Number	7	21	20	4	3	2	57
Percent	(12.3)	(36.8)	(35.1)	(7.0)	(5.3)	(3.5)	(100.0)
Rural Entrant							
Number	0	17	7	10	3	6	43
Percent	(0.0)	(39.5)	(16.3)	(23.3)	(7.0)	(14.0)	(100.0)
Total							
Number	7	38	27	14	6	8	100
Percent	(7.0)	(38.0)	(27.0)	(14.0)	(6.0)	(8.0)	(100.0)

No significant difference

urban and rural entrants respectively. Three times as many urban entrants as rural entrants rented half-sections and 32% of the urban entrants rented over 320 acres compared to 48% of the rural entrants.

With regard to land rented out to other farmers, four of the urban entrants and two of the rural entrants rented out quarter sections. One rural entrant rented out 80 acres another rented out 480 acres.

It would seem that urban entrants own and rent fairly large segments of land. At the same time, farm sales of this entrance group are significantly lower than sales of rural, full-time farming entrants. Thus, concern about the productivity of part-time farming families can be focussed on the urban entrant.

Type of Operation

Concerning type of operation, it was found that 49% of the urban entrants were involved in cash grains, 36% in beef, .1% in hogs and .01% in dairy compared to 44%, 42%, .07% and .07% of rural entrants respectively. These differences were not significant. An examination of farm sales from these enterprises, however, shows that the rural entrants had higher sales from these commodities than the urban entrants.

F. Off-farm Employment Characteristics

Tables VI.11 and VI.12 describe the part-time segment of the survey sample according to off-farm occupational categories. The majority of the farm operators from an urban, non-farming entrance position were involved in transportation or white collar occupations while the rural, full-time farming entrants were more evenly dispersed among the categories. The sample size was, however, too small for tests of significance.

Most of the spouses working off the farm were involved in clerical occupations. Reflecting the differences in education between urban and rural entrants, there were more urban entrants in teaching and managerial positions than rural entrants.

G. Reasons to Farm and Reasons to Work Off the Farm

As previously discussed, there are some significant differences between part-time farming families from an urban and from a rural entry position with regard to economic and farm production characteristics. Investigating the reasons why the respondents farmed and why they worked off the farm will help to explain differences in attitudes which may be responsible for some of the farm production differences.

Respondents were asked to rate three preselected reasons for farming in order of importance. These ratings were replaced with ordinal rankings by using an index of 3 points for a first choice, 2 points for a second choice and

TABLE VI.11

OCCUPATIONAL CATEGORIES OF FARM OPERATORS

FARM FAMILY	C A T E G O R I E S						TOTAL
	Sales and Serv. Rel.	Res. Rel.	Prod., Proc.	Const. Trades	Trans.	Man., Admin.	
Urban Entrant							
Number	7	2	2	4	19	11	45
Percent	(15.5)	(4.4)	(4.4)	(8.9)	(42.2)	(24.4)	(100.0)
Rural Entrant							
Number	4	2	2	2	5	5	20
Percent	(20.0)	(10.0)	(10.0)	(10.0)	(25.0)	(25.0)	(100.0)
Total							
Number	11	4	4	6	24	16	65
Percent	(16.9)	(6.2)	(6.2)	(9.2)	(36.9)	(24.6)	(100.0)

No Significant difference

TABLE VI.12

OFF-FARM OCCUPATIONAL CATEGORIES OF SPOUSES

FARM FAMILY	C A T E G O R I E S						TOTAL
	Cler.	Sales	Trans.	Teach.	Sci., Tech.	Man., Admin.	
Urban Entrant							
Number	13	2	1	4	4	6	30
Percent	(43.3)	(6.7)	(3.3)	(13.3)	(13.3)	(20.0)	(100.0)
Rural Entrant							
Number	9	5	2	2	6	3	27
Percent	(33.3)	(18.5)	(7.4)	(7.4)	(22.2)	(11.1)	(100.0)
Total							
Number	22	7	3	6	10	9	57
Percent	(38.6)	(12.3)	(5.3)	(10.5)	(17.5)	(15.8)	(100.0)

No Significant difference

1 point for a third choice. The results of this rating are presented in Table VI.13. Using Spearman rank order correlation coefficients[10] ,the differences between urban and rural entrants with regard to reasons were tested for significance.

Urban entrants placed more importance on reasons to farm such as "country living" and "environment" while rural entrants placed more importance on reasons such as "wanting to farm" and "inherited the farm" although there was not as much difference in the rankings of the reasons as expected.

Reasons to work off the farm were also rated and indexed in an identical fashion. Spouses were asked to answer in a separate column to determine if any differences existed within the families (see Table VI.14).

Farm operators from an urban entrance position worked off the farm for economic reasons such as investment in the farm operation and to maintain a standard of living. Maintenance of a trade or profession was ranked forth among the urban entrants. Because of the education levels achieved by this group, it was expected that this reason would be ranked higher. Compared to rural entrants, however, more importance was placed on this reason as the rural entrants ranked maintenance of a trade or profession sixth. Rural

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[10]Spearman's rank order correlation coefficient is defined as *the sum of the squared differences in the paired ranks for two variables over all cases, divided by a quantity which can perhaps best be described as follows: it is what the sum of the squared differences in ranks would have been had the two sets of rankings been totally independent. This quotient is then subtracted from 1 to produce the standardized coefficient.*

TABLE VI.13

REASONS TO FARM IN ORDER OF IMPORTANCE: PART-TIME FAMILIES

REASONS	R A N K S *	
	Urban Entrant	Rural Entrant
Lower Housing Costs	8	8
To Live In The Country	1	3
Better Environment For Children	3	5
To Supplement Income	6	10
Inherited The Farm	7	2
Wanted To Start Farming	2	1
To Resume Farming	5	6
To Be Closer To Relatives	10	9
To Be More Self-Sufficient	4	4
Other	9	7
TOTAL	55	55

* A rank of '1' indicates the most important reason;
* A rank of '10' indicates the least importan reason.

Spearman Correlation Coefficients
r^2 = .6606
n = 10
Sig= .019

TABLE VI.14

REASONS TO WORK OFF THE FARM
FOR FARM OPERATORS AND SPOUSES

REASONS	RANK			
	Operators		Spouses	
	Urb. Ent.	Rur. Ent.	Urb. Ent.	Rur. Ent.
Maint.Trade/Prof.	4	6	2	2
Incr. Inc. Req.To Maint. Stand. Liv.	2	1	1	1
Imprv. Position	5	5	7	7
Pay Off Debts	3	2	4	6
Inc. Req. To Maint. Or Invest In Farm Op.	1	3	3	5
Permit Childr. To Take Over Farm	9	8	9	8
Start New Tr./Prof.	8	9	8	9
Job Near Home Bec.Avail.	6	4	6	3
Other*	7	7	5	4
TOTAL	45	45	45	45

* The two 'other' categories have been combined

Spearman Correlation Coefficients
Farm Operators: $r^2 = 0.3138$, n = 10, sig = .189
Spouses: $r^2 = 0.2195$, n = 10, sig = 271
Rural Entrants (Operators by Spouses): $r^2 = -0.0619$, n = 10, sig = .433
Urban Entrants (Operators by Spouses: $r^2 = 0.6942$, n = 10, sig = .013

entrants placed the same reasons as being of importance but with farm investment ranking third behind maintaining a standard of living and paying off debts.

Spouses worked off the farm to increase family income and to maintain a trade or profession. The interest in career related reasons such as maintaining a trade or profession, was expected to be higher for spouses than for operators as the education levels of spouses was higher.

H. Adjustments Made to the Farm Operation

As indicated in the literature, the off-farm job and the farm operation compete for the available labor and resources of the part-time farm family. Changes in both areas of endeavor can be expected in order to accomodate the dual nature of the allocation of labor inherent in a part-time farming situation. Respondents were asked to indicate if they had made adjustments to the farm operation and to the off-farm job. As expected, there were more adjustments made to the farm operation than to the off-farm job due, in part, to the greater flexibility of farming compared to other occupations. The percentages of respondents indicating adjustments is shown in Table VI.15.

The small number of urban entrants stating "no specific adjustments" compared to rural entrants may indicate that the rural entrant sees the off-farm job as less of an impediment to getting the farm work done than the urban entrant. Following this observation, more urban entrants

TABLE VI.15
ADJUSTMENTS MADE BY PART-TIME FARM FAMILIES

ADJUSTMENTS	PART-TIME FAMILIES			
	Urban Entrant		Rural Entrant	
	No.	%	No.	%
To The Farm Operation				
No Spec. Adj.	10	(10.0)	15	(26.7)
Work Longer Hrs.	34	(34.0)	14	(25.0)
Get Fam. Help	23	(23.0)	7	(12.5)
Contr. Farm Work	8	(8.0)	2	(3.5)
Hire Help	4	(4.0)	2	(3.5)
Change Fr. Op.	10	(10.0)	8	(14.2)
Red. Size Of Op.	6	(6.0)	6	(10.7)
Other	5	(5.0)	2	(3.5)
TOTAL	100	(100.0)	56	(100.0)
To The Off-Farm Work				
No Spec. Adj.	18	(24.0)	23	(50.0)
Off-Farm Wk. With Flex. Hrs.	17	(22.6)	9	(19.5)
Use Paid Vac.Time	14	(18.6)	4	(8.6)
Time Off Fr. Work	14	(18.6)	6	(13.0)
Career/Job Compat. With Farm	6	(8.0)	0	(0.0)
Hire Add. Staff	3	(4.0)	3	(6.5)
Other	3	(4.0)	1	(2.1)
TOTAL	75	(100.0)	46	(100.0)

stated that they "worked longer hours" than rural entrants. These differences can be expected as more urban entrants than rural entrants worked full-time off the farm.

Urban entrants were more likely to involve the family and hire or contract help to get the farm work done than were rural entrants. Rural entrants, however, were more inclined to change the farm operation or reduce the off-farm job. This is of some concern, as the rural entrants were more productive in general than the urban entrants.

As expected, rural entrants had more respondents stating "no specific adjustments" to the off-farm job. This could be a result of the fact that more rural entrants worked part-time off the farm than urban entrants. Urban entrants indicated more flexability in the off-farm job than rural entrants, as evidenced by the higher percentage of responses from this group in the next three categories. None of the rural entrants responded to the category of choosing a career or job compatible with farming, compared to 8% of the urban entrants. This may be explained by two reasons. First, rural entrants have less choice in the job market because of educational levels, age and a reluctance to work full-time off the farm; secondly, there are very few careers or jobs available that are compatible with farming.

To summarize, urban entrants are more likely to make adjustments to the off-farm job to accommodate farming, while rural entrants are more likely to adjust the farming operation. Rather than being a reflection of committment to

farming or the off-farm job, these results indicate that the farming families make the adjustments in the areas where they are more secure. This is unfortunate, as the sphere of life which can suffer the most from adjustments is the sphere where these adjustments are made.

VII. CONCLUSIONS AND IMPLICATIONS

Selected socio-economic and farm production characteristics of farm families on the rural-urban fringe of Edmonton have been explored and compared, pointing out the differences between part-time and full-time farming families. These differences were extensive, and as such, warranted a closer look at the part-time segment of the agricultural community on the rural-urban fringe.

The nature and extent of part-time farming was determined by examining selected characteristics of the farm families involved, assessing the nature of adjustments made and by discovering the reasons these people have for farming and for working off the farm. This analysis took the form of a comparison between urban and rural entrants into part-time farming. The basis of this comparative framework (entry direction) has been noted to be a distinctive methodological tool used to further the understanding of part-time farming (Wayt, 1959; Fuguitt, 1961, 1963, 1977; Fuller, 1976; Kada, 1980; Heffernan, 1981; Buttel, 1982 and Mage, 1982).

Reviewing the objectives of this research as outlined in Chapter I, the empirical determinants required for the research problem have been completed. There remains, however, the general objective which was *to determine the nature and extent of part-time farming on the rural-urban fringe of Edmonton and to determine the implications of this phenomenon for agricultural policy*. As rural sociology is an applied field of endeavor, the results from this empirical

study must be applied in a practical sense either to the population from which the data were derived or, in this case, to the institutions which have a mandate to serve this population.

Taking into consideration the small sample size, the bias towards full-time farm families which resulted from the sampling procedures and the low response rate, it sould seem that these results may only be used to tentatively, at best, suggest implications for agricultural policy. However, when this empirical evidence is combined with the extensive literature review reported in Chapter II, it is clear that the researcher may indeed make inductive statements concerning implications. These implications will be stated later in this chapter.

The data which have been gathered form a base from which to draw attention to further analysis and research, adding to and enriching the aggregate data which is available concerning part-time farming in Alberta. The results, in themselves, point out many areas for further research. These areas will also be outlined in this chapter.

A. Summary of Results

Forty percent of the sample was engaged in off-farm work in addition to farming. Of these, 34% reported full-time off-farm work. Sixty-six percent of the rural entrants into part-time farming worked full-time off the farm, while 32% of the rural entrants had full-time off-farm

jobs.

Full-time farming families lived closer to the city than part-time farming families. The opposite was expected. The part-time farming families living far away from the city were comprised mainly of those from a rural entrance position.

The average age of all farm operators in the sample was 50 years of age; the operators from part-time farming families averaged 45 years of age; full-time, 53 years of age. Part-time farming was most prevalent in the 40-year-old to 49-year-old age class, although 44% of the rural entrants were 50 years of age or older, compared to only 28% of the urban entrants.

As well as being younger, operators from part-time farming families are more highly educated than those from full-time farming families, with 49% or the urban entrants and 24% of the rural entrants having secondary education.

The age and education distribution for spouses was similar to that of operators, with the exception of the higher education levels attained by the spouses in general. Forty-eight percent of spouses compared to 33% of operators had completed high school. Eighteen percent of spouses compared to 10% of farm operators had college or university level education. Reflecting the differences found among the operators, the urban entrants had more secondary education and training than the rural entrants. The majority of the sample was raised on a farm. However, of those with an urban

background, there was a distinct tendency to be involved in part-time farming rather than full-time farming. Fifty-seven percent of the part-time farming families had an urban, non-farming background, while 43% had a rural, full-time farming background.

Farm incomes of part-time farming families were generally much lower than that of full-time farming families with a moderate proportion (14%) of the former having sales of over $100,000.00 (attributed to part-time off-farm work). The distribution of farm sales and dependency on agriculture for part-time farming families becomes polarized with the majority of urban entrants in the lower sales classes with a minimum dependency on agriculture and the rural entrants in the higher sales classes with the accompanying major dependency on agriculture.

There was very little difference between full-time and part-time farming families with respect to farm size. The urban entrants, however, had all of the small (1 - 69 acre) farms, while 14% of the rural entrants (compared to 4% of the urban entrants) had farms of over 760 acres.

With respect to type of operation, there were no significant differences between full- and part-time and between urban and rural entrants. Almost one-half of all farm families were engaged in cash grains and just over one-third were involved in beef cattle. Twelve percent of the full-time farming families were engaged in hogs and 12% engaged in dairy compared to 8% and 4%, respectively, of the

part-time farming families.

In general, full-time farming families had higher average sales from these commodities than the part-time farming families. Average sales of the urban entrants were consistently lower than sales of rural entrants.

The bank was the most important source of credit for 78% of the sample. A distinct reluctance to use credit was evident from the sample although responses showed that credit was used extensively. There were few perceived limitations with respect to credit eligibility among part-time farm families.

Future plans are an indicator of commitment to farming and to the off-farm job. A summary of the responses shows that farm families are reasonably sure they will be in the same position in the near future, with part-time farm families planning to be in the same position in the next five years but increasing farm activity and decreasing off-farm work in the next ten years.

Prices for agricultural products, machinery costs, energy costs, interest rates, marketing systems and lack of time for family activities were cited as being important problems for both full-time and part-time farming families. The only difference between these two groups with respect to problems was that part-time farming families tended to view the problems of interest rates and farm labor availability as being slightly less important than full-time farming families. Problems related to off-farm work were not as

important to part-time farming families as were problems relating to the farm operation.

The most important source of farming information was "own experience" for both full-time and part-time farming families. This was followed by "family" and "friends and neighbors" in importance. There were no definite differences between the two groups.

Elevator agents were contacted most frequently for information, followed by bank or lending agency personnel and farm equipment and supply salesmen. District agriculturists, fieldmen and district home economists were contacted by the highest percentage of respondents. There was very little difference between full- and part-time farming families with respect to extent of contact, although part-time farming families were in contact with district agriculturists and fieldmen less often than full-time farming families, the importance of this source of information was the same for both.

Most of the part-time farm operators from an urban entrance position were involved in transportation and white collar occupations (42% and 24%, respectively). The rural entrants were more evenly distributed in the construction industry, transportation, white collar jobs and sales/service related jobs. The majority of spouses in both groups were involved in clerical occupations off the farm.

Urban entrants placed slightly more importance on country living as a reason to farm than rural entrants,

although the differences between these two groups with respect to reasons to farm were minimal. Most of the rural entrant respondents farmed because they wanted to farm or had always farmed. The majority of the respondents worked off the farm for economic reasons, although spouses consistently ranked the maintenance of a trade or profession as second in importance. Increased income required to maintain a standard of living was the most important reason for working off the farm in almost all cases.

Urban entrants are more likely to make adjustments to the off-farm job, while rural entrants tend to make adjustments to the farm operation.

B. Implications and Recommendations

Policy makers are concerned with arriving at decisions which lead to the fulfillment of objectives. Agricultural objectives for Alberta focus on; one, the productivity of land used to provide the supply of low cost food; and two, the welfare of farmers and rural communities. As indicated in Chapter I, the traditional focus of policy formulation has been the full-time farmer. Now, however, because of the increase in part-time farming, this traditional focus must be reconsidered.

In the light of the findings presented in previous chapters, the researcher has determined the following implications for agricultural policy.

1. The differences found between full and part-time farming

families with respect to selected characteristics point out that part-time farming families are a distinct segment of agriculture on the rural-urban fringe of Edmonton. Therefore, part-time farming families should be considered separately when formulating policy decisions which have an effect on the farming population in the study area.

2. The consideration of part-time farming families should take the form of acceptance of part-time farming as a legitimate and efficient type of labor allocation between the farm and the non-farm sectors of the economy.
3. Labor is a resource that part-time farming families use efficiently. The efficient use of land and capital, however, may be restricted within this segment. Therefore, policy measures designed to increase the efficient use of land and capital sould be devised.[11]
4. Part-time farming families are not the same as full-time farming families. The goals and objectives with respect to agricultural production should not be the maximization of output but the maximization of efficient use of resources available within the constraints of the off-farm work. Policy measures should be directed to

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[11] Care must be taken to determine ways to encourage more efficient use of these resources. For example, the investment capital required for machinery for a full-time farmer should be different than that required for a part-time farmer who would not get the same return from hours used because the hours available for use are limited. In this example, a *scaling down* of equipment investment should be encouraged for the part-time farmer.

this end.

5. The urban, non-farming entrant to part-time farming is different from the rural, full-time farming entrant. Urban entrants farm because they want to, rural entrants take off-farm work because of economic necessity. On this basis, these two groups should be differentiated when making policy decisions.
6. The urban entrant should not be dismissed but should be recognised as a potential resource in agricultural production and the rural community and should be encouraged, through specialized extension efforts, to increase farm productivity.
7. The urban entrant is a potential source of agricultural innovation introduction because of skills (organizational, etc.) acquired from off-farm occupations. This source should be explored.
8. The rural, full-time farming entrant merits consideration in other areas. Off-farm work is used as a means to acquire the capital required to remain in agriculture. The industry of agriculture in this metropolitan fringe area, at this time, cannot support as many full-time farm families as in the past. Price supports designed to keep people in full-time farming perpetuate or delay difficulties, they do not solve problems. Alternatives to farm maintenance or expansion such as encouragement towards more intensive types of farm operations should be examined by policy makers.

9. A complete reversal of policy focus is required for the rural entrant into part-time farming, turning away from the farm and towards the sectors which provide the off-farm work. Adjustments in non-farm sectors are areas requiring consideration. Industrial and business decentralization, more flexible work hours, an acceptance by employers that farmers have demands on their time which are different than the time demands of non-farmers are examples of areas where policy implications come to light.

C. Areas for Further Research

Within the rural-urban fringe, part-time farming is just one adjustment to changes in land use and the effects of urbanization. A more complete picture of fringe agriculture would include consideration of families operating small farms and families living on acreages. The methodology used in this research could, with some modification, be applied to research into these areas.

Moving into other areas of interest arising from the results, the researcher feels that the question of increased movement into the non-farm work force by farm women is an area which has hardly been touched in Western Canada by rural sociologists. The sheer numbers of women involved in working off the farm is an indication of changes which deeply affect the farm operation and family life.

Another area of further research which has been stimulated by results found is the question of part-time farming in other areas of the province, specifically, areas of low agricultural productivity and areas of high agricultural productivity which are situated away from the influences of urbanization. Empirical research on part-time farming in these areas would round out the picture of part-time farming in Alberta and would point out differences causes by environmental and social influences, if any.

D. Concluding Statement

Alberta is moving into a new developmental phase. Urbanization, expansion of secondary and tertiary industries and developments in transportation and communication infrastructures have led the researcher to believe that changes in the agricultural structure of the province are inevitable just as structural changes in other areas of Canada and the United States have followed close on the heels of these developments. Part-time farming is an adjustment to these changes and, as such, will move towards becoming more of a permanent fixture in the agriculture profile of the province rather than a transitional state indicating movement into and out of agriculture. As a part of the structure of agriculture, part-time farming is an important influence on agricultural income, rural population changes, farm stability and the social structure of rural communities. The phenomenon should not be viewed only in the

agricultural context, however, but in the larger socio-political environment in which it is found. Only through empirical studies such as this one can the phenomenon in a certain area be understood and through this understanding be placed, with the correct perspective, into the larger society.

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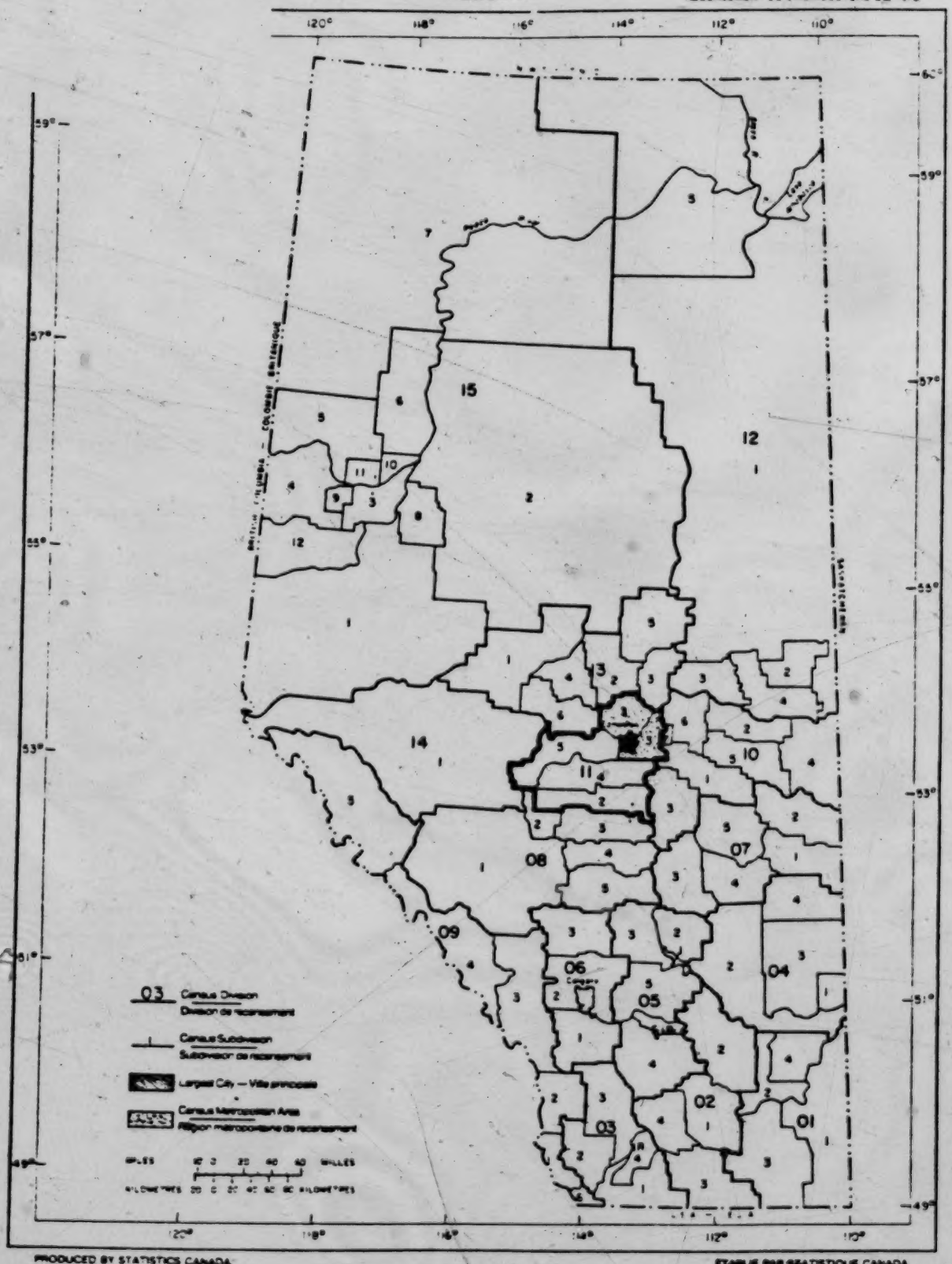
APPENDIX A

Maps

ALBERTA

RECENSEMENT DE L'AGRICULTURE DE 1976



PRODUCED BY STATISTICS CANADA

ETABLIE PAR STATISTIQUE CANADA

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6
FIFTH

APPENDIX B

Questionnaire

DEPARTMENT OF RURAL ECONOMY
The University of Alberta
Edmonton, Alberta . T6G 2H1
Phone: (403) 432-4225

May 3, 1982

Dear Respondent

In recent years there has been an increase in the number of people who combine various kinds of agricultural activities with non-farm jobs and occupations. However, little is known about the problems and resources of such individuals and households. Therefore, through the attached survey the Department of Rural Economy, University of Alberta is trying to gain an understanding of the ways that people in Alberta combine farming with other work.

Your name has been randomly selected to be part of this study. We request your cooperation in completing the enclosed questionnaire and returning it as soon as possible in the stamped envelope enclosed in this package. We wish to assure you that the information supplied by you will be treated with utmost care and in complete confidence.

The information from this study will be helpful to various agencies and organisations involved in agricultural and rural development work in Alberta. It is our hope that, based on the results of this study, they will be encouraged to design more appropriate programs for people like yourself. Therefore, the half-hour you take to fill out this questionnaire is greatly appreciated.

We wish to thank you for your cooperation in filling out this questionnaire and wish you a happy summer.

Yours Sincerely,

Dhara S. Gill
Professor
Telephone: 432-4598

Part-Time Farming Survey

Recently, in Alberta, there has been an increase in the number of people who combine farming with other jobs and occupations. The purpose of this survey is to find out more about this situation and how the people involved cope with the problems (if any) which arise from working in two worlds.

This survey should be filled out by either the husband or wife or both. If no married couple lives at this address the survey should be filled out by the farm operator or landowner.

INSTRUCTIONS: Please mark (X) the answer which corresponds to your situation or fill in the blanks where required. When you have finished completing the questionnaire, please return it as soon as possible in the stamped, self-addressed envelope provided. Thank you.

Return to: Part-Time Farming Survey
Department of Rural Economy
5th Floor, General Services Building
University of Alberta
Edmonton, Alberta T6G 2H1

1. **Is this family or household presently operating a farm?** (An agricultural holding of 1 acre or more)
   - ☐ YES (please go to question 2)
   - ☐ NO (please go to question 7)

2. **How long have you operated this farm?** _____ years.

3. **This farm is _____ miles from Edmonton.**

4. **Before obtaining this farm, the husband or farm operator:** (Please check)
   - ☐ Farmed somewhere else
   - ☐ Worked on this farm but did not make the major farming decisions
   - ☐ Worked at another occupation and lived here (state occupation) _____
   - ☐ Worked at another occupation and did not live here (state occupation)_____

5. **Where did the husband or farm operator live before obtaining this farm?**
   - ☐ Here
   - ☐ On another farm
   - ☐ In a small town
   - ☐ In a city

6. **What were the major reasons for this family or household to start farming?** Please number three (1, 2, 3) reasons in order of importance to you.
   - ☐ Lower housing costs
   - ☐ To live in the country
   - ☐ Better environment for children
   - ☐ Supplement income
   - ☐ Inherited the farm
   - ☐ Wanted to start farming
   - ☐ Wanted to resume farming after being away from farming
   - ☐ To be closer to relatives
   - ☐ To be more self-sufficient
   - ☐ Other (please explain) _____

(Now, please go to question 9)

... Over

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7. **If not presently farming, the husband or farm operator has:**
   - ( ) Retired
   - ( ) Works at another occupation (state occupation) _____
   - ( ) Other (please explain) _____

8. **Do you presently own land?** ( ) YES ( ) NO
   If yes, what is that land being used for?
   - ( ) Farmed by someone else
   - ( ) Not farmed (please explain what the land is being used for) _____

   _____

   (Now, please go to question **25**)

---

9. **Who is considered the farm operator in this family?**
   - ( ) Husband
   - ( ) Wife
   - ( ) Both

10. **Does the husband have an off-farm job/occupation at present?** ( ) YES ( ) NO

    If yes, what is his job title/occupation? _____
    (If self-employed, please state type of business).

    How long does it usually take to commute **one way** to his place of employment?
    ____ minutes

    How much time (approximately) was spent by him on off-farm jobs/occupations in 1981?

Jan. to March	April to Sept.	Oct. to Dec.
____ hours/day	____ hours/day	____ hours/day
____ days/week	____ days/week	____ days/week
____ weeks/month	____ weeks/month	____ weeks/month

11. **Does the wife have an off-farm job/occupation at present?** ( ) YES ( ) NO

    If yes, what is her job title/occupation? _____
    (If self-employed, please state type of business).

    How long does it usually take to commute **one way** to her place of employment?
    ____ minutes

    Last year, how much time (approximately) was spent by her on off-farm jobs/occupations in 1981?

Jan. to March	April to Sept.	Oct. to Dec.
____ hours/day	____ hours/day	____ hours/day
____ days/week	____ days/week	____ days/week
____ weeks/month	____ weeks/month	____ weeks/month

... Over

The next two questions concern the adjustments and problems that may have arisen as a result of the combination of farm work with work off the farm.

12. a. **What adjustments have been made to the farm operation in order to accommodate off-farm work?** (Please check the adjustments which apply to you)

- ☐ No specific adjustments
- ☐ Work longer hours than normal
- ☐ Get family help with farm work
- ☐ Contract farm work
- ☐ Hire help
- ☐ Change the farm operation (for example, from beef to grain)
- ☐ Reduce size of operation
- ☐ Other (please explain) _____

_____

b. **What adjustments are made to off-farm work in order to accommodate farm work?** (Please check which apply to you).

- ☐ No specific adjustments
- ☐ Choosing off-farm work with flexible hours
- ☐ Use paid vacation time to work on the farm
- ☐ Take time off from work to complete farm tasks
- ☐ Change to a career or job more compatible with farming
- ☐ Hire additional staff
- ☐ Other (please explain) _____

_____

13. **Now I would like to know some of your reasons for working in occupations other than farming.** (Please number three (1, 2, 3) reasons in order of importance to you).

Husband (if working off the farm)	Wife (if working off the farm)	Reasons
_____	_____	Maintain a trade or profession
_____	_____	Increased income required to maintain standard of living
_____	_____	Improve retirement position
_____	_____	Income required to pay off debts
_____	_____	Need outside income to maintain or invest in farm operation
_____	_____	Permit children to take over farming operation
_____	_____	Start a new trade or profession
_____	_____	A job near home became available
_____	_____	Other (please specify) _____
_____	_____	_____

... Over

14. **In the future you would like to:** (please check)

	Remain in Same Position	Increase Farming Activity	Decrease Farming Activity	Increase Off-farm Work/Activity	Decrease Off-farm Work Activity
In next 5 years	☐	☐	☐	☐	☐
In next 10 years	☐	☐	☐	☐	☐

15. What do you think **urban non-farmers** feel about farmers and farming? For each word or group of words, circle the number which indicates the extent to which you agree or disagree.

Urban non-farmers think that farmers are:

	Strongly Disagree				Strongly Agree
Chronic complainers	1	2	3	4	5
Hard working	1	2	3	4	5
Poorly educated	1	2	3	4	5
Rich	1	2	3	4	5
Happy	1	2	3	4	5
Independent	1	2	3	4	5

Urban non-farmers think that farming:

	Strongly Disagree				Strongly Agree
Is a low status occupation	1	2	3	4	5
Is a stressful way of living	1	2	3	4	5
Is important to the economy	1	2	3	4	5
Leads to an independent life style	1	2	3	4	5

16. How strongly do you agree or disagree with the following statements?

	Strongly Disagree				Strongly Agree
Farming is an ideal way of living	1	2	3	4	5
Farming allows you to be your own boss	1	2	3	4	5
Beginning farmers must have some training and education in agriculture	1	2	3	4	5
I would encourage my children to go into occupations other than farming	1	2	3	4	5
Farmers have no control over production, management and land use decisions	1	2	3	4	5

... Over

Now I would like some information about your farm operation. Please fill in the following blanks which apply to your situation.

17. Land Use Last Year (1981)

TENURE (1981)	ACRES
Total owned	_____
Rented from others	_____
Rented out to others	_____

CULTIVATED (1981)	ACRES
Cereal Crops	_____
Oilseeds	_____
Forages	_____
Field crops (including potatoes)	_____
Pasture	_____
Fallow	_____
Unused land	_____
Farmstead	_____
Other Uses _____	_____

Value of products sold (1981) $_____

18. Livestock Last Year (1981)

BEEF CATTLE
Cow/calf _____ units

Feeder _____ head

Value of cattle sold (1981) $_____

HOGS
Total hogs _____

Kind of operation (please check which apply)
- ☐ Farrowing
- ☐ Finishing
- ☐ Complete
- ☐ Other (specify)_____

Value of hogs sold (1981) $_____

SHEEP
Number _____

Kind of operation (please check which apply)
- ☐ Wool
- ☐ Meat
- ☐ Breeding
- ☐ Other (specify)_____

Value of products sold (1981) $_____

HORSES
Head _____

Kind of operation (please check which apply)
- ☐ Breeding
- ☐ Boarding, training
- ☐ Recreation
- ☐ Other (specify)_____

DAIRY CATTLE
Milk cows _____ head

Calves _____ head

Value of products sold (1981) $_____

POULTRY (Chicken)
Number of layers _____ birds

Number of broilers _____ birds

Value of products sold (1981) $_____

POULTRY (Other)
Number of geese _____ birds

Number of ducks _____ birds

Value of products sold (1981) $_____

GOATS
Number _____

Kind of operation (please check which apply)
- ☐ Meat
- ☐ Milk
- ☐ Breeding
- ☐ Other (specify)_____

Value of products sold (1981) $_____

OTHER LIVESTOCK
(Please explain nature of operation).

_____

_____

_____

... Over

19. Other Farming Activities

GREENHOUSE
Sq. ft under _____ glass, _____ plastic

Major crops (please check)
( ) Cut flowers
( ) Bedding plants
( ) Tomatoes or cucumbers
( ) Propagated nursery stock
( ) Other _____

Value of products sold (1981) $_____

NURSERY OR TREE FARM

Acres _____

Value of products sold (1981) $_____

BEES

No. of hives _____

Value of products sold (1981) $_____

VEGETABLES AND SMALL FRUITS

Acres _____

Major crops (please check)
( ) Asparagus
( ) Leaf crops (lettuce, spinach)
( ) Cole crops (cabbage, broccoli)
( ) Root crops (carrots, beets, onions)
( ) Cucumbers, squash
( ) Corn
( ) Peas, beans, tomatoes

TYPE OF OPERATION
( ) Market garden
( ) Pick your own
( ) Contract growing
( ) Farm gate sales
( ) Other _____

Value of products sold (1981) $_____

SOD

Acres _____

Value of products sold (1981) $_____

MUSHROOMS

Sq. ft. of beds _____ sq. ft.

Value of products sold (1981) $_____

OTHER FARMING ACTIVITIES (please explain nature of operation). This would include operations such as peat mining, gravel pits, anything else done on your land for which you receive income.

_____

_____

_____

_____

_____

... Over

20. Please check the total value of agricultural products sold in 1981.

☐ Under $1,200	☐ $10,000–14,999	☐ $45,000–49,999
☐ $1,201–2,499	☐ $15,000–24,999	☐ $50,000–74,999
☐ $2,500–4,999	☐ $25,000–34,999	☐ $75,000–99,999
☐ $5,000–9,999	☐ $35,000–44,999	☐ $100,000 or more

21. What portion of your total disposable family income in 1981 came from the sale of agricultural products? (please check) For example: Total family income = $28,000. Sale of agricultural products = $10,000. Divide $10,000 by $28,000 and multiply by 100 = 35%.

☐ 0–10%	☐ 41–50%	☐ 81–90%
☐ 11–20%	☐ 51–60%	☐ 91–100%
☐ 21–30%	☐ 61–70%	
☐ 31–40%	☐ 71–80%	

22. With regard to your farming decisions, how important to you are each of the following sources of information? (Please circle the number which corresponds best to the level of importance for you).

Sources	Not Important				Very Important
District agriculturists, agricultural fieldmen	1	2	3	4	5
University personnel	1	2	3	4	5
University or government publications	1	2	3	4	5
Marketing organizations	1	2	3	4	5
Bank or lending agency personnel	1	2	3	4	5
Private consultants	1	2	3	4	5
Elevator agents	1	2	3	4	5
Farm magazines	1	2	3	4	5
Newspapers	1	2	3	4	5
Radio	1	2	3	4	5
TV	1	2	3	4	5
Farm implement, feed and supply dealers	1	2	3	4	5
Friends, neighbours	1	2	3	4	5
Family	1	2	3	4	5
Own experience	1	2	3	4	5

.. Over

23. How often were you or your family in contact with each of the following extension sources in 1981 for advice on your farming operation? (please check).

	Not In Contact	1–6 Times Per Year	Monthly	Weekly
District Agriculturist	____	____	____	____
Agricultural Fieldman	____	____	____	____
District Home Economist	____	____	____	____
Regional Specialist	____	____	____	____
University Personnel	____	____	____	____
Experimental Station Staff	____	____	____	____
Bank or Lending Agency Staff	____	____	____	____
Salesmen	____	____	____	____
Elevator Agent	____	____	____	____

24. Now I would like to ask a question about sources of credit. (Please check).

Sources of Credit	Would Not Use	Have Used In Past 5 Years	Would Like to Use But Not Eligible	Plan to Use In Next 5 Years
Bank	☐	☐	☐	☐
Credit Union	☐	☐	☐	☐
Alberta Development Corp.	☐	☐	☐	☐
Small Business Dev. Corp.	☐	☐	☐	☐
Alberta Opportunity Company	☐	☐	☐	☐
Farm Credit Corp.	☐	☐	☐	☐
Federal Business Development Bank	☐	☐	☐	☐
Farm supply or implement dealers	☐	☐	☐	☐
Vendor financing	☐	☐	☐	☐
Relatives	☐	☐	☐	☐
Other (please specify)	☐	☐	☐	☐

_____

25. Of the above sources of credit, which one is the most important source for you?

_____

... Over

26. How important do you consider the following problems to be for you and your family? (Please circle the number which best corresponds to the importance of each problem).

PROBLEMS	Not Important				Very Important
Credit availability	1	2	3	4	5
Interest rates	1	2	3	4	5
Prices for agricultural products	1	2	3	4	5
Marketing systems for agricultural products	1	2	3	4	5
Urban expansion	1	2	3	4	5
Availability of technical farming advice	1	2	3	4	5
Availability of farm managerial advice	1	2	3	4	5
High land prices	1	2	3	4	5
Low land prices	1	2	3	4	5
Availability of land to rent	1	2	3	4	5
Energy costs	1	2	3	4	5
Machinery costs	1	2	3	4	5
Farm labor availability	1	2	3	4	5
Availability of appropriate machinery	1	2	3	4	5
Off-farm work hours	1	2	3	4	5
Wages and salaries from off-farm work	1	2	3	4	5
Adequate child care	1	2	3	4	5
Commuting costs	1	2	3	4	5
Availability of leisure time	1	2	3	4	5
Availability of entertainment facilities	1	2	3	4	5
Adequate schools	1	2	3	4	5
Availability of recreation facilities	1	2	3	4	5
Availability of health care facilities	1	2	3	4	5
Time for community activities	1	2	3	4	5
Time for family activities	1	2	3	4	5

... Over

27. **An important part of this study is about your family or household composition.** Please fill in the following blanks. (There is no need to include the names of family or household members).

	AGE	EDUCATION (please circle last completed year)
Husband	____	Grade 6 7 8 9 10 11 12 13 Technical/Vocational 1 2 3 4 College/University 1 2 3 4 5
Wife	____	Grade 6 7 8 9 10 11 12 13 Technical/Vocational 1 2 3 4 College/University 1 2 3 4 5

You have _____ child(ren) at home, the age(s) are: _____

Do the children help with farm work? ☐ YES ☐ NO

You have _____ child(ren) living away from home, the age(s) are: _____

28. **You were raised:** (please check)

	In a City	In a Small Town	On a Farm
Husband	☐	☐	☐
Wife	☐	☐	☐

29. **Who answered this questionnaire?**

☐ Husband
☐ Wife
☐ Other (please specify) _____

30. If you have any additional comments regarding the questionnaire or your own situation, please feel free to use the following space.

_____

_____

_____

_____

_____

Thank you very much for filling out this questionnaire. Please return it in the envelope provided.

Return to:

Part-Time Farming Survey
Department of Rural Economy
5th Floor General Services Bldg.
University of Alberta
Edmonton, Alberta, T6G 2H1